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(54) Title: METHOD AND SYSTEM FOR FACILITATING AUTOMATED INTERACTION OF MARKETABLE RETAIL ORDERS AND PROFESSIONAL TRADING INTEREST AT PASSIVELY DETERMINED PRICES
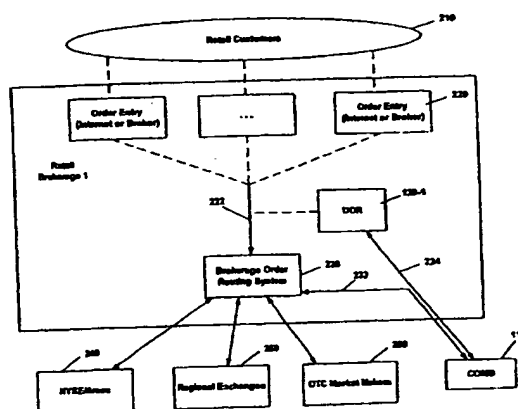
(57) Abstract: A method and system for an automated trading network that continuously collects invisible, anonymous, binding orders and indications of interest to buy and sell specific equity securities at variable, passively determined prices and, then, executes trades based on these collected orders and indications. In general, the binding orders are collected from retail broker-dealers and the binding indications are collected from institutions. The variable, passively determined, non-discrete prices can be linked to the National Best Bid or Offer (NBBO) for each security, or some other prevailing market indicator, at the time a trade is executed. In an embodiment of the method and system, marketable retail orders which match with one or more collected institutional indications, are routed from a Dynamic Order Router (DOR) at each broker-dealer to a Central Order-Match Box (COMB) to be executed against the one or more matched collected institutional indications. The COMB also manages most other aspects of transactions in the method and system and continuously executes trades against the collected institutional indications at improved prices relative to the NBBO.

METHOD AND SYSTEM FOR FACILITATING AUTOMATED INTERACTION OF MARKETABLE RETAIL ORDERS AND PROFESSIONAL TRADING INTEREST AT PASSIVELY DETERMINED PRICES

FIELD OF THE INVENTION

The present invention is directed to a network for the electronic trading of financial instruments, and in particular, a system and method for automatically executing marketable retail orders against standing professional trading interest at passively determined prices.

BACKGROUND

Traders and investors who desire to buy or sell securities place orders with brokers who trade on the floor of organized stock exchanges – such as the New York Stock Exchange ("NYSE") or the American Stock Exchange ("Amex") – they send orders to over-the-counter ("OTC") market-makers trading on the NASDAQ market, and they utilize crossing networks, electronic communications networks ("ECNs"), and other electronic trading systems, such as Reuters' Instinet®, ITG Inc.'s Portfolio System for Institutional Trading (POSIT®), and Optimark Technologies, Inc.'s OptiMark™. While many exchanges and electronic trading systems offer broker-dealers and institutional investors (collectively, "institutions," "institutional investors," "institutional clients," "professional market participants," and "professional investors") the opportunity to trade, directly or indirectly, with other professional market participants, these trading venues either completely disallow or severely curtail opportunities for efficient interaction between institutional orders and many of the orders generated by retail investors. Specifically, while institutional investors participating in markets which receive retail order flow can often interact with retail non-marketable orders, the opportunity to interact with retail marketable orders either does not exist at all (for reasons identified below) or requires the manual services of a human broker, rendering the process so cost-

prohibitive as to make it impractical for professional market participants interested in sustained interaction with these orders. "Retail marketable orders" consist of post-open market orders and marketable limit orders (that is, buy limit orders priced at or above the current best offer, and sell limit orders priced at or below the current best

5   bid), which are generally executed immediately at prevailing best bids or offers. "Retail non-marketable orders" consist of all other order types – for example, pre-open orders (that is, orders entered outside normal market hours), non-marketable limit orders (that is, buy limit orders priced below the current best offer, and sell limit orders priced above the current best bid), market-on-close orders, and so forth.

10   Retail non-marketable orders are typically not subject to immediate execution.

In the case of non-exchange-listed (that is, NASDAQ) securities, and of exchange-listed securities traded in the OTC market (that is, "Third Market" securities), both retail marketable orders and retail non-marketable orders have historically been executed by OTC market-makers acting in a principal capacity

15   pursuant to order-routing and remuneration arrangements with retail brokerage firms, or they have been "internalized" by retail brokerage firms routing these orders to specialist or dealer affiliates which execute them in a principal capacity. Regulatory changes enacted by the Securities and Exchange Commission (SEC) in recent years have made it possible for some of these orders to interact with trading

20   interest other than that of the market-maker or dealer to whom they were routed for execution. Specifically, the SEC now requires market-makers (as well as exchange specialists and other dealers) to (1) display certain customer limit orders in their public quotations, where they are visible to, and sometimes accessed by, other market participants, and (2) desist from "trading ahead" of unexecuted orders in their

25   possession by buying or selling any security as principal at a price which would satisfy an unexecuted customer order in that security. However, while these regulations sometimes result in retail non-marketable orders being executed against retail marketable orders or against trading interest from other professional investors, it remains the case today that retail marketable orders received by OTC market-

30   makers and other dealers are rarely, if ever, available for execution against the trading interest of other professional market participants.

In the case of exchange-listed securities executed on the NYSE or Amex, interaction between the large, generally block-size, orders of professional market

participants (which are typically greater than 10,000 shares in size) and retail

marketable orders is theoretically possible, but requires the services of a human floor

broker, who must physically stand in "the crowd" at the trading post for a security on

the exchange floor in order to compete with the public limit order book and other

5   floor brokers for the opportunity to interact with incoming retail marketable orders

on the opposite side of the market. It should be noted that the only strategy for

interaction with retail marketable orders on the exchange floor available to

professional market participants that does not require the services of a floor broker

involves the placement of large, publicly displayed limit orders. Because such

10   orders often result in highly adverse market impact to the market participant placing

the orders, they are impractical as a mechanism for interaction with marketable retail

orders and are therefore never utilized for this purpose. In the absence of extant or

expected block-size contra trading interest by another broker, floor brokers working

large orders are generally not willing to stand at a trading post on the exchange floor

15   for an extended period solely to compete for small retail marketable orders. Thus,

while it is possible in theory for a professional market participant to interact at

favorable terms with individual retail marketable orders on the floor of the NYSE or

Amex through the services of a human floor broker, there is currently no automated

or cost-effective way to accumulate large aggregate positions over an extended

20   period by interacting with hundreds or thousands of small retail orders.

Although they are individually small (about 600 shares in size, on average),

the trades of retail investors represent a potential source of substantial aggregate

liquidity – approximately 40% of total share volume in NYSE and NASDAQ issues

is retail, and approximately 50% of retail orders in NYSE and NASDAQ stocks are

25   marketable. Moreover, because the relatively small marketable orders placed by

retail investors generally result in negligible market impact, or price slippage, and

are typically information-less (that is, the orders are not normally motivated by

informed predictions regarding short-term price movements), they are highly

attractive to professional market participants as a source of liquidity for securities

30   transactions. However, given the above described limitations on: (1) simple access

to retail marketable orders (as, for example, in the case of internalized orders or

orders routed to OTC market-makers for execution); and (2) efficient access to such

orders where simple access is not structurally disallowed (as, for example, on the

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floor of the NYSE and Amex), a crossing network is needed which facilitates continuous, fully electronic, anonymous, automated, and non-display-based interaction between professional market participants and retail marketable orders. Such a network would fill an important niche not only by effectively

5   disintermediating existing specialists and OTC market-makers for many orders (thereby giving other professional market participants the opportunity to interact directly with these retail marketable orders at favorable prices), but also by automating the otherwise prohibitively labor-intensive process of accumulating sizeable aggregate positions via a large number of small transactions with retail

10   counterparts.

SUMMARY OF THE INVENTION

An embodiment of the present invention is directed to a computerized trading network (the "System") that collects from broker-dealers, institutions (such

15   as pension funds and mutual funds), and other professional market participants invisible, anonymous, binding indications of interest to buy and sell specific equity securities at passively determined, non-discrete prices. In the System, the passively determined, non-discrete prices may be linked to the National Best Bid or Offer ("NBBO") for each security, or some other prevailing market indicator. In one

20   embodiment of the present invention, these prices will always be equal to the midpoint of the current NBBO at the time of trade. In embodiments of the present invention, the System continuously routes from retail brokerage firms (collectively, "retail brokerage firms," "brokers," "brokerages," "broker-dealers," and "brokerage participants") marketable retail orders which satisfy the institutional indications to a

25   central facility - specifically, to a Central Order-Match Box ("COMB"), which maintains a master institutional indications file, executes retail and institutional trades, and manages most other aspects of transactions on the System - where they are immediately and continuously executed against the institutional indications. This is in contrast to existing systems, such as POSIT®, which accumulate

30   institutional trade indications only and then execute the accumulated trade indications at predetermined times. For example, POSIT® compares all of the accumulated orders to determine matches and then executes the marketable orders at

set times during the trading day, that is, every hour on the hour from 10:00 AM to
3:00 PM Eastern time.

Embodiments of the present invention are expected to be very attractive both
to retail brokerage firm participants and institutional clients. By interacting
5   anonymously with generally information-less retail trading interest "upstream" of
traditional execution points (that is, OTC market-makers, exchanges, ECNs, and so
forth), institutions will for the first time enjoy automated electronic access to
marketable retail orders, which represent an attractive new source of substantial
market liquidity. In an embodiment of the present invention, both retail marketable
10   orders and offsetting institutional indications can be executed at prices inside the
quoted NBBO spread (that is, at prices between the national best bid and national
best offer). In this embodiment, retail brokerage firms would, through the use of the
System, provide their customers with executions evidencing, on average, a high
degree of "price improvement" relative to other market centers. In addition,
15   pursuant to a remuneration arrangement with the System sponsor, the retail
brokerage firms would realize a greater portion of the intrinsic economic value of
their marketable retail order flow. The impending decimalization of U.S. equity
markets, which is likely to result in five-cent trading increments for most NYSE,
NASDAQ, and Amex securities by 7/3/00 and penny increments by ½/01, will
20   further enhance the attractiveness of embodiments of the present invention. The
narrower average spreads, which should result from this transition to smaller
decimal trading increments, are likely to decrease the liquidity available at the
NBBO and reduce or eliminate traditional remuneration for retail order flow by
Third Market and NASDAQ dealers. By facilitating access to a steady stream of
25   retail liquidity for institutions and providing a relatively stable source of order flow
remuneration for retail brokerages, embodiments of the present invention will be
particularly compelling in the decimal trading environment. It should be noted that
while the System is designed primarily to facilitate the continuous and immediate
interaction, without waiting for set times, between institutional trading interest and
30   retail marketable orders, the System could also permit similar continuous,
immediate, automatic and fully electronic institution-to-institution crosses. These
institution-to-institution crosses will generally occur at the midpoint of the NBBO

whenever institutional clients willing to transact with non-retail trading interest enter two or more offsetting institutional indications.

In an embodiment of the present invention, the indications of interest are entered into the System by institutional clients and can include, for example, the

5   following information: side (buy or sell), security symbol, number of shares, and maximum or minimum price (optional). For as long as an indication, or a residual portion thereof, is active in the System, the indication represents the submitting institution's willingness to interact with offsetting retail marketable orders (and, at the submitting institutions option, offsetting institutional indications) at the midpoint

10   of the NBBO. This interaction would result in trades for the institution on the specified side of the specified symbol up to an aggregate quantity equal to the specified (or remaining) number of shares.

Transactions on the System are also subject to any limits specified by the submitting institution governing the maximum or minimum price at which it is

15   willing to transact. For example, an institutional indication to buy 50,000 shares of IBM "up to" 132 1/4 signifies the submitting institution's willingness to buy up to a total of 50,000 shares of IBM at the (variable) midpoint of the NBBO, as long as it never transacts at a price greater than 132 1/4. This indication would therefore be "active" when, for example, the NBBO for IBM is 131 5/8 x 131 3/4 (in which

20   market the institution would buy from counter-parties at 131 11/16, the market midpoint), but would be "inactive" when, for example, the NBBO for IBM is 132 3/8 x 132 ½ (since the midpoint of this market, 132 7/16, exceeds the institutional indication's price limit of 132 1/4). An inactive indication present in the System would not result in any trades, just as if the indication did not exist at all. It should

25   be noted that price limits for indications are strictly optional and they are included and specified at the sole discretion of institutional clients submitting indications. An indication submitted without an associated price limit would simply represent the submitting institution's willingness to trade at the midpoint of the NBBO (whatever this price happens to be) on the specified side of the specified symbol up to the

30   specified number of shares. Unless explicitly indicated otherwise, all indications used in the following descriptions of various embodiments of the present invention can be assumed to be active.

Each institution can submit indications in more than one security, and can

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cancel or modify its unexecuted indications electronically at any time. Indications entered into the System are not displayed on any terminal or in any quotation; they are completely invisible to all System and other market participants, including, under normal operating conditions, the System sponsor. Moreover, the anonymity

5   of institutional clients is preserved throughout the clearance and settlement process by having the System sponsor serve as counter-party for all transactions executed on the System. For example, in the case of a match between an institutional indication and a retail order, the System sponsor will always buy from the retail brokerage firm and immediately sell to the institutional investor, or vice-versa. In the case of a

10   match between two institutional indications, the System sponsor will always buy from one institution and immediately sell to the other institution.

In an embodiment of the present invention, institutional indications are entered electronically from institutional client sites via a graphical user interface or other communications interface (collectively, Institutional Interface ("II"))

15   connected to the COMB by communications links. For example, these communications links can include, but are not limited to, the following: leased telecommunication lines, dedicated data lines, the Internet, wireless communication systems, digital subscriber lines, radio frequencies, cable and the like. Retail orders are selectively diverted to the System for immediate execution against institutional

20   indications through a network of specially designed hardware and software modules called Dynamic Order Routers ("DORs"), which are integrated into the internal order-handling systems of participating retail brokerage firms and connected to the COMB by communications links. The COMB dynamically updates information to all DORs regarding the symbol and side of offsetting marketable retail orders it

25   "seeks" in order to satisfy institutional indications already resident in the System. When a DOR "sees" a retail order in a symbol/side for which the COMB has no interest, it does nothing – allowing the order to be routed to some other execution point pursuant to the brokerage firm's primary order-routing matrix. When a DOR sees a marketable retail order in a symbol and side for which the COMB *does* have

30   interest, it dynamically queries the COMB for final instructions. The COMB immediately responds with instructions to (1) route the order to the System for execution against an existing institutional indication, or (2) decline the order (or do nothing), in which case the order will automatically be routed to its default

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execution point pursuant to the brokerage firm's primary order-routing matrix. In

embodiments of the present invention, non-marketable orders are never routed to the

System for execution and marketable orders are only routed to the System to satisfy

existing institutional trading interest already present in the System. As a result, all

5   retail orders routed to the System are executed immediately against one or more

offsetting institutional indications. For each transaction, the System generates

appropriate execution reports and transmits these to the retail and institutional

parties to the transaction, as well as to a Self Regulatory Organization and other

industry reporting systems for the purpose of complying with applicable trade

10   reporting and processing procedures.

In a representative embodiment of the present invention, DOR modules can

be integrated directly into the internal order-handling system of participating

brokerages. The present invention is not, however, limited to such an embodiment.

A participating brokerage firm might, for example, prefer to interact with the System

15   not through a direct interface to its internal order-handling system, but rather

through an interface between the System and a third-party order-routing service

bureau (such as ADP or Beta Systems), ECN, or other order flow aggregator which

is already routing, receiving, or otherwise processing the retail brokerage firm's

orders. The present invention is intended to contemplate any such integration,

20   which would provide the System with access to a brokerage firm's marketable retail

orders.

The embodiments of the present invention are also intended to represent any

crossing network which facilitates continuous (as opposed to periodic, or call-

based), fully electronic, anonymous, automated, non-display-based interaction

25   between professional market participants and retail marketable orders. In an

embodiment of the present invention, in order to minimize the near-term disruption

of existing business relationships between the retail brokerage firms and the OTC

market-makers, exchanges, and other trading venues to which these retail brokerage

firms currently route retail orders for execution, the network will divert for

30   immediate execution on the System only those binding retail marketable orders for

which the System has binding professional trading interest already in hand, that is

binding indications, allowing all other retail orders to flow to other execution points.

"Binding" orders and "binding" indications represent firm commitments by

originating parties to trade securities, where the commitments do not require additional confirmation or approval from the originating party in order to execute a trade based on the firm commitment, as long as the binding order or binding indication remains active. The present invention is offers from originating parties to

5   trade securities, where the offers do not require additional confirmation or approval from the originating party in order to execute a trade based on the firm offer. not, however, limited to such an embodiment, that is, to a crossing network based on selective diversion of marketable retail orders. Specifically, the present invention can be represented by any crossing network which facilitates the interaction of retail

10   marketable orders and professional trading interest in a manner substantially similar to one described in this application. Therefore, the present invention contemplates covering OTC market-maker, ECN, national or regional stock exchange, or other execution point systems which allow professional market participants to interact immediately, continuously, electronically, anonymously, automatically, and without

15   display of their trading interest, with retail marketable orders routed to that execution point. For example, one contemplated embodiment of the present invention involves a system for an OTC market maker that matches incoming retail marketable orders with third-party institutional orders in a manner substantially similar to that described in this application. This system allows the market-maker to

20   collect risk-free commission revenue (from institutional clients) for any institutional shares executed against retail order flow in this manner, while handling non-matched marketable retail orders in the traditional manner (that is, interacting them with offsetting limit orders on the market-maker's book, and/or committing capital to execute them as principal). It should be noted that such an embodiment of the

25   present invention would not require any selective diversion of retail order flow to the system. This is because retail brokerages would already be routing orders (using traditional, static order-routing criteria such as symbol, order size, and order type) to the OTC market maker for execution.

30   ## BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 illustrates a functional block diagram of the overall architecture for a crossing network in accordance with an embodiment of the present invention.

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Figure 2 is a system diagram illustrating how the present invention might interface with a retail brokerage firm.

Figure 3A is a high-level diagram illustrating the interrelationship between the present invention and a series of retail brokerage and institutional participants.

5   Figure 3B shows one embodiment of the interrelationship between the present invention and a series of retail brokerage and institutional participants.

Figure 4 is a system diagram of a representative embodiment of the present invention detailing individual software, hardware, and other technology sub-components in accordance with an embodiment of the present invention.

10   Figure 5 is a flow chart diagram illustrating the operation of the overall system process by which institutional order indications and retail orders are matched and executed in a central order match box (COMB) in accordance with an embodiment of the present invention.

15   DETAILED DESCRIPTION

The present invention is described below in the context of trading equity securities. However, the invention is not so limited and can be easily adapted to allow the trading of other liquid assets such as options, bonds, derivatives, and the like. Accordingly, where the context permits, the terms "securities," "stock," and

20   "shares" when used herein includes other instruments that can be traded, such as, for example, options, bonds, and derivatives. The terms "buy" and "sell" include, where appropriate, bid and offer, etc.

In embodiments of the present invention, intended users of the System are typically, on the one hand, professional investors, such as institutional investors (for

25   example, a pension fund manager), market makers, and the institutional agency and/or proprietary trading desks of broker-dealers, and on the other hand retail brokerage firms. As used herein, the term "institution" (and all other equivalent terms as defined in the Background section of this application) refers to any non-retail person or entity that wishes to make a trade and "retail brokerage" means any

30   source of retail orders.

Referring now to the drawings, FIG. 1 illustrates a functional block diagram of the overall architecture for a crossing network in accordance with an embodiment of the present invention. A Central Order Match Box ("COMB") 110 executes retail

orders and institutional indications transmitted to the COMB 110 from various retail

brokerage firms and institutional investors. In an embodiment of the present

invention, retail orders are selectively routed to the COMB 110 by Dynamic Order

Routers ("DOR") 120 integrated into the internal order-handling system of

5   participant brokerage firms and connected to the COMB 110 via, for example,

leased telephone lines, the Internet or other suitable communications system (not

shown). Institutional Interface ("II") 130 software allows institutional investors to

submit, modify, and cancel indications on the System, as well as to receive trade and

other status reports from the COMB 110. IIs 130 are similarly connected to the

10   COMB 110 via communication links, such as, leased telephone lines, the Internet or

other suitable communications system (not shown). In an embodiment of the

present invention, II 130 is implemented as a Financial Information Exchange

("FIX")-based application programming interface ("API") and/or a graphical user

interface ("GUI") for use by the institutional investors.

15   In an embodiment of the present invention, the COMB 110 maintains master

indications file and uses this to inform the order-selection mechanism in each of the

DOR modules. In this embodiment of the present invention, the COMB 110

automatically matches and then executes retail orders received from the DORs 120

and institutional indications received from the IIs 130. In embodiments of the

20   present invention, matching involves pairing a retail order with at least one opposite

side institutional indication for each security, where for example, an opposite side

match would be defined by a buy order with a sell indication for a stock A or a sell

order with a buy indication for the stock A. Matching can also involve pairing two

or more opposite side institutional indications for each security. These trades are

25   executed using information received from data feeds 140, which provide real time

quotes, last sale, and other trading information for each security being traded on the

System. Following the execution of each order, the COMB 110 sends execution

reports to the brokerages and institutions involved in the order and then reports the

retail and institutional trades to the relevant stock market consolidated tapes, for

30   example, NASDAQ 150.

          FIG. 2 illustrates a system diagram of the order-handling and order-routing

systems of a representative retail brokerage firm in accordance with the present

invention. In FIG. 2, a plurality of retail customers 210 are illustrated as being

connected to a plurality of order entry modules 220 at a representative retail
brokerage firm. The order entry modules 220 can be implemented as either an
Internet or similar electronic connection or as a human broker who can manually
receive retail orders from the retail customers 210 and then forward the orders on to

5   the brokerage firm's order routing system 230. In an embodiment of the present
invention, an individual DOR module 120-1 is illustrated connected to the COMB
110 via a connection 224 to dynamically send and receive data from the COMB 110.
The DOR module 120-1 is also connected to the brokerage's retail order stream 222
for the purpose of instructing that certain orders be routed to the COMB 110 for

10   execution, either directly via the DOR 120-1 and connection 224, or indirectly via
the order routing system 230 and a separate connection 232. In an embodiment of
the present invention, one method of implementing the direct routing is for the DOR
module 120-1, using instructions from the COMB 110; to selectively route orders
from the retail order stream 222 to the COMB 110 for execution via connection 224.

15   In this case, the order selected for routing to the COMB 110 can be diverted from
the retail order stream 222 to the COMB 110, and therefore would not continue on
to the brokerage order-routing system 230. Upon receipt of the diverted retail order,
the COMB 110 would immediately execute the trade and return an execution report
to the retail brokerage via the same connection 224. In another embodiment of the

20   present invention, the direct routing method can be implemented by programming
the retail brokerage order routing system 230 to route all retail orders, or all retail
marketable orders, to the COMB 110 via connection 232, irrespective of whether
offsetting institutional indications are present in the COMB 110. In this
embodiment, the COMB 110, which would receive a much larger number of orders,

25   would selectively and immediately execute those retail orders for which it has
offsetting institutional indications, and transmit execution reports for these orders
back to the brokerage order routing system 230 via connection 232. Those orders
received by the COMB 110 for which the COMB 110 does not possess offsetting
institutional indications would be immediately and automatically routed back to the

30   brokerage order routing system 230 via connection 232, or a separate
communications link (not shown), for routing by the brokerage order routing system
230 to other execution points including national exchanges 240, regional exchanges
250, and OTC market-makers 260. In this embodiment, the retail brokerage order-

routing system 230 would be programmed to initially route all retail orders, or all retail marketable orders, to the COMB 110 for review and selective execution, and to route all orders returned to it from the COMB 110 to the alternative execution points for execution, as indicated above. By incorporating the order-selection

5   mechanism within the COMB 110, this method of direct routing does not require a separate DOR module 120-1 or the associated communications link 224.

In another embodiment of the present invention, one method of implementing the indirect routing is for the DOR module 120-1, using instructions from the COMB 110, to selectively "tag" certain orders (for example, by entering a

10 special character in the order string, or otherwise modifying a field in the order's message format) for routing to the COMB 110. The DOR module 120-1 is generally connected to the input retail order stream 222 prior to the brokerage order routing system 230 in order to tag the selected orders before they enter the brokerage order routing system 230 and receive default routing assignments to alternative execution

15 points. The internal brokerage order routing system 230 can be modified to route all "tagged" orders to the COMB 110 via connection 232 for execution. Untagged orders are always routed by the brokerage order routing system 230 to alternative execution points, such as, national stock exchanges 240, regional exchanges 250, and OTC market-makers 260, pursuant to existing business relationships between

20 participant brokerages and those other execution points. The COMB 110 immediately executes any orders it receives and sends trade reports back to the originating brokerage firms via the same communications link. In an embodiment of the present invention which incorporates indirect routing, the DOR 120-1 has an associated DOR "interest list" (not shown), which can list, for example, the symbol

25 and side of marketable retail orders the COMB 110 seeks for execution against institutional indications already resident in the System. The interest list can be updated dynamically by the COMB 110 as trades are executed. In an embodiment of the present invention, the DOR 120-1 compares each retail order from the input retail order stream 222 with the DOR interest list. A potential match exists when,

30 for example, a retail marketable sell order for security XYZ is received and a sell XYZ entry exists on the DOR interest list (reflecting the presence of an institutional buy indication in XYZ in the COMB 110). If a potential match is found, the DOR 120-1 immediately queries the COMB 110 for final instructions on how to proceed

with regard to this order via the connection 224. The COMB 110 responds via the

connection 224 with final instructions to, for example, "tag" the retail order to be

transmitted to the COMB 110. In this case, the tagged retail order continues to the

brokerage order routing system 230 where it is routed to the COMB 110 via the

5   connection 232. Once the COMB 110 receives the tagged retail order, the tagged

retail order is immediately executed against an offsetting institutional indication. A

report of the executed trade is then transmitted back to the brokerage order routing

system 230 via connection 232.

In other embodiments of the present invention, the COMB 110 may be

10   connected to a series of DOR modules 120-1 through 120-n at various retail

brokerage firms, as well as to a series of institutional clients using IIs 130-1 through

130-m to submit orders. A high-level view of this constellation of participants is

illustrated in FIG. 3A.

FIG. 3A is a high-level diagram illustrating the interrelationship between the

15   present invention and a series of retail brokerage and institutional participants. In

this embodiment, the COMB 110 is connected through a plurality of

communications links to a plurality of DOR modules 120-1 through 120-n at

different retail brokerages 1 through N. Likewise, COMB 110 is connected through

a plurality of communications links to a plurality of II modules 130-1 through 130-

20   m at different institutional clients 1 through M.

In an embodiment of the present invention, institutional clients will utilize

the II 130 (for example, a FIX-protocol-based Application Programming Interface or

Graphical User Interface) to communicate with the COMB 110. The II 130 is used

to enter, modify, and cancel indications, and serves as the mechanism used by the

25   COMB 110 to communicate various trade and status reports to institutional clients.

Through possible business arrangements with other trading system, data, and

technology vendors, third-party terminals or electronic interfaces may also be used

by institutional clients to communicate with the COMB 110. Indications entered

into the COMB 110 by institutional clients will be completely invisible to all other

30   System clients and market participants. These indications will not be displayed on

any screen, terminal, or quotation, or otherwise communicated to any person or

entity (excepting, of course, for an institutional client's ability to view its own

indications in the COMB 110) in any way. In the normal course of business, these

indications will also not be viewed by the staff and associated persons of the System sponsor. In the event of a *force majeure* or other special situation, however, System technical staff may be required to view some indications for the purpose of assessing or remedying a technology or operational failure, in which case robust business

5   policies and procedures will serve to protect the confidentiality of institutional information present in the System. Since the System sponsor will serve as counter-party on both sides of every trade executed on the System (that is, execute the retail order as a riskless principal and simultaneously trade as a riskless principal against the institutional indication), the anonymity of institutional clients will be preserved

10   throughout the clearance and settlement process.

While trades on the System will be reported to the consolidated tape, it will be impossible for any outside observers or "downstream" execution points to determine the number, size, or price boundaries of institutional indications present in the System. At best, this reporting will sometimes make it possible, depending on

15   the specific execution-price protocol embodied in the System, for a motivated observer utilizing sophisticated techniques to deduce the *existence* of a buy or sell indication on the System in a particular security. Since information regarding the mere existence of a professional buyer or seller in a given stock is often available today via floor brokers, upstairs brokers, and electronic indication systems such as

20   AutEx, it is extremely unlikely that potential front-runners will find this information to be of much proprietary trading value. Moreover, the passive nature and "slow but steady" pace of institutional trading on the System may appeal primarily to market participants who are *not* trading on a short-term time horizon – a fact which further erodes the value of available information to potential front-runners. It is therefore

25   highly likely that representative embodiments of the present invention will provide the degree of anonymity and invisibility institutional clients require and, thus, prevent front running of their block-size trading interests. "Front-running" occurs when a third party who has learned of a large (unexecuted) institutional order to buy or sell immediately transacts on the same side of the same security for its own

30   account in an effort to capitalize on the expected price appreciation or depression which will result from execution of the larger institutional order. In the process, the front-runner's order results in price slippage, which is detrimental to the institutional investor.

15

FIG. 3B illustrates an embodiment of the present invention in which two

different retail brokerages and five different institutions are connected to the COMB

110. In FIG. 3B, the COMB 110 includes an institutional order database 305, which

stores the pending and partially completed institutional indications in a master

5   indications file, which is compiled from indications received through the

connections to the IIs at institutions 130-1, 130-2, 130-3, 130-4 and 130-5,

respectively. The COMB 110 is implemented as a distributed software system

running either on a single computer or a networked set of computer systems, which

could be either server platforms or workstations using standard personal computer

10   (PC) technology. For example, a computer hosting a software application that

comprises a piece of the COMB 110 may be a Sun® dual-processor UltraSPARC™-

II-based server operating at 450 MHz and with 512 to 4096 MegaBytes (MB) of

random access memory (RAM); a mass memory storage unit, such as a floppy disk, a

zip disk, a DVD disk, a hard disk drive, a rewritable optical disk, a flash memory or

15   other non-volatile storage device; and sufficient communication capabilities to

connect the COMB 110 to each of the individual DOR 120, II 130 and other

components.

In another embodiment of the present invention illustrated in FIG. 3B, the

computer hosting the software application that comprises a piece of the COMB 110

20   may be an Intel® Pentium®-based PC operating at 500MHz and with 128 to 512

MegaBytes (MB) of random access memory (RAM); a mass memory storage unit,

such as a hard disk drive; and sufficient communication capabilities to connect the

COMB 110 to each of the individual DOR 120, II 130 and other components.

FIG. 4 illustrates a functional system diagram of an embodiment of the

25   present invention which details individual software, hardware, and other technology

sub-components in accordance with an embodiment of the present invention. In

FIG. 4, COMB 110 includes one or more Match Box components 400, which can

manage institutional and retail orders and execute these orders against each other.

The Match Box component 400 is connected to: 1) a FIX Middleware Converter 410

30   which is, in turn, connected to a MarketPoint FIX engine 415; the FIX Middleware

Converter 410 is a software module that can convert messages back and forth

between the language spoken by the Match Box 400 and the language spoken by the

MarketPoint FIX engine 415; the MarketPoint FIX Engine 415 can maintain a

network connection to multiple Retail FIX engines 460 and Institutional FIX

engines 470 and exchange orders, execution reports, and related messages in the FIX

language with these other FIX engines; 2) a Data Warehouser component 420 which

is, in turn, connected to a Clearing and Settlement System 425; the Data Warehouser

5   420 can store all information related to orders executed or otherwise handled by the

COMB 110; the Clearing and Settlement System 425 can transmit clearing and

settlement data to the clearing broker and prepare periodic trade summary reports for

System customers and regulators; 3) a Trade Report Scanner 430; the Trade Report

Scanner 430 can perform Automated Confirmation of Transactions (ACT)-reporting

10   duties and handles other real-time trade reporting requirements; 4) a Quote Feed

Parser 435; the Quote Feed Parser 435 is connected to several external real time data

feeds (such as those offered by Reuters, Bridge, or Bloomberg, for example) and can

capture quote and transaction data (such as the NBBO, last trade, etc.) which it can

then transmit to the Match Box 400; 5) a DOR Proxy 440; the DOR Proxy 440

15   maintains the state of connections (such as "live" or "dead") from the retail broker

DOR Server modules and relay messages between the Match Box and the DOR

Server applications; and 6) a Monitor GUI 450, which can be used to examine the

state (such as "live" or "dead") of applications in the system, manually enter orders

or executions into the Match Box, and correct orders or fills already known to the

20   Match Box when an error occurs.

In FIG. 4, the DOR 120 includes one or more DOR Server applications 443,

each of which is connected to one or more DOR Client instances 442. Each DOR

Server 443 is externally connected to the COMB 110 by way of the DOR Proxy 440.

The DOR Client 442 is also connected, outside of the DOR 120, to at least one

25   Retail Broker System 316, which is, in turn, connected to a Retail FIX Engine 460

which is connected to the MarketPoint FIX Engine 415. The DOR Client 442 sees

every retail order flowing through a brokerage's internal order-handling system (part

of Retail Broker System 316) and, for each order, queries the DOR Server 443

regarding the possibility of a potential match. The DOR Server 443 maintains a

30   local institutional indication list (the "interest list") and, using the contents of this

interest list, decides in real time whether a potential match exists for any order for

which it receives a query from the DOR Client 442. If no potential match exists, the

DOR Server 443 immediately instructs the DOR Client 442 to decline the subject

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order. Alternatively, if no potential match exists, the DOR Server 443 can do nothing, which also results in the subject order being automatically declined. When the DOR Server 443 receives a query from the DOR Client 442 regarding an order for which a potential match exists, it immediately queries the COMB 110 for final

5   instructions concerning the subject order. If the COMB responds with instructions to accept the subject order, the DOR Server 443 will transmit this instruction to the DOR Client 442 which originally submitted the query for the subject order. The DOR Client 442, which is integrated into the retail brokerage's order-handling system, would then flag the subject order by informing the Retail Broker System

10   316 that the order should be routed to the System for execution. The Retail Broker System 316 represents the internal order-handling and order-routing system of a retail brokerage firm that participates in the System. When the Retail Broker System 316 is informed by the DOR Client 442 that the subject order should be routed to the System, it passes this information to the Retail FIX Engine 460. The Retail FIX

15   Engine 460 then transmits the order in the FIX language to the COMB 110. If the COMB 110 responds with instructions to decline the subject order, the DOR Server 443 transmits these instructions to the DOR Client 442 or, alternatively, the DOR Server 443 can do nothing, in which case the subject order is also automatically declined. In this case, when the subject order is declined, the subject order is routed

20   to another market center for execution based on the brokerage firm's primary order-routing matrix.

In FIG. 4, II 130 is connected to the MarketPoint FIX Engine 415. Institutional System 480 is connected to the Institutional FIX Engine 470, which is also connected to the MarketPoint FIX Engine 415. The Institutional GUI

25   Application 475 is software with a graphical interface that allows traders at participating institutions to manually enter, view, or modify orders entered into the System by their firm. The Institutional System 480 is the internal order routing and management system of an institutional client of the System. In an another embodiment of the present invention, as an alternative to the Institutional GUI

30   Application 475, the Institutional FIX Engine 470 can automatically transmits orders directly from the institution to the COMB 110 using existing institutional order routing and management software that is used by traders of the institution.

FIG. 5 is a flowchart that describes the operation of the overall system by which retail and institutional orders are matched and executed in accordance with an embodiment of the present invention. In FIG. 5, in block 505 institutional clients submit one or more buy and sell indications in one or more securities. In block 510,

5   the COMB receives and stores the institutional indications and updates the DOR interest lists. In block 515 a check is made to determine if any institution-to-institution matches exist and, if so, flow continues with block 550 described below. In block 507, a participating brokerage receives buy and sell orders from retail clients, either before, concurrent with, or after blocks 505, 510, and 515. If no

10   institution-to-institution matches are found in block 515, then in block 520 a check is made to determine if the DOR has any potential matches among retail orders it has seen and compared to its local interest list. If there is a potential match, then in block 530 the DOR queries the COMB for final instructions regarding the potentially matching retail order. In block 535 the COMB responds to the DOR

15   with instructions to route the potentially matching retail order to the COMB, in which case flow continues with block 540, or it responds with instructions to decline the retail order (or fails to respond at all), in which case flow continues with block 505 as described above. If any potentially matching retail orders are affirmatively accepted by the COMB in block 535, then in block 540 the brokerage order routing

20   system routes the matched matching retail order to the COMB. In block 545, the COMB receives the retail order and immediately and automatically executes the retail order against one or more offsetting institutional indications in block 550. Following the execution of trades in block 550, in block 555 the COMB reports the transactions to the consolidated tape and to the originating retail brokerage firm and

25   institutional client(s) which were parties to the transaction, and updates the databases at the COMB and, as appropriate, at each connected DOR to reflect the results of the executed trade. In block 560 a check is made to determine if the COMB should stop processing orders and, if not, then the flow continues with block 505 as described above. If, in block 560, it is determined that the COMB is to stop processing orders,

30   then in block 565 the COMB performs a system clean up and shuts down the system.

Although a variety of execution-price protocols are possible, in one embodiment of the present invention, one quarter of the NBBO spread for each retail

share executed on the System against an institutional indication will accrue to the

end retail investor in the form of "guaranteed" price improvement (that is, retail

investors whose orders are executed on the System would always buy at a price ¼

spread lower than the national best offer and sell at a price ¼ spread higher than the

5   national best bid), and that another quarter of the NBBO spread will accrue to the

originating retail brokerage firm pursuant to a revenue-sharing arrangement. The

remaining 50% of the NBBO spread will always go to the institutional client in the

form of a midpoint execution. The System will generate proprietary revenue (which

is not expected to be re-distributed to brokerage partners as order flow remuneration)

10   by charging these institutional clients a per-share commission for trades on the

System.

This distribution of the NBBO spread, in accordance with an embodiment of

the present invention, is illustrated in the following example:

15   Example 1:

NBBO:	IBM 131 5/8 x 131 3/4 (spread = 1/8)
RETAIL ORDER:	SELL 500 IBM MKT
INSTITUTIONAL INDICATION:	BUY 50,000 IBM up to 132 1/4

20   RETAIL EXECUTION: SLD 500 IBM @ 131 21/32 (price
                                                          improved by ¼-spread, or 1/32nd)

INSTITUTIONAL EXECUTION: BOT 500 IBM @ 131 11/16 (market
                                                          midpoint)

BROKERAGE REMUNERATION: ¼-spread, or 3.125 cents/share

25
The process involved in executing the Example 1 transaction is provided in

Table 1.

Table 1.

1:	Institutional client submits the following indication to the System via an II.

<u>BUY 50,000 IBM, up to 132 ¼</u>

(Assume that NBBO for IBM is 131 5/8 x 131 3/4 and that this is the only indication in any symbol present in the System.)

2:    The indication is received by the COMB, which updates its internal "master file" of indications to reflect the existence of this new indication.

3:    The COMB simultaneously updates its "interest list" at all DOR modules to instruct that they query the COMB whenever they "see" marketable SELL orders in IBM. ·

4:    DOR modules "see" retail orders in other symbols, orders to BUY IBM, and non-marketable orders to SELL IBM. DORs do not query the COMB for any of these orders, which are routed, untouched by DORs, to other execution points (e.g., the NYSE, regional exchanges, OTC market-makers, etc.) pursuant to existing business relationships between participant brokerages and those execution points.

5:    A DOR module "sees" the following marketable SELL order in IBM:

<u>SELL 500 IBM MKT</u>

6:    The DOR module instantaneously queries the COMB for instructions regarding whether to route this order to the System for execution, either directly or by "tagging" the order for routing through the brokerage's order-routing system. Assume for purposes of this discussion that the "tagging" methodology is used.

7:    The COMB receives this query, checks its master file of indications to confirm that there is an active indication to BUY IBM, and immediately responds to the DOR with instructions to tag the retail order for routing to the COMB.

8:    The DOR module tags the order (by inserting a special character or otherwise modifying its message string) for routing to the COMB.

9:      The tagged order flows through the order-routing system of the participant brokerage firm, which "reads" the tag and routes the order to the COMB for execution.

10.   The COMB receives the retail order, and immediately executes it against the offsetting indication as follows:

Retail Execution: <u>SOLD 500 IBM 131 21/32</u> (price improved by 1/4-spread, or $1/32^{nd}$)

Institutional Execution: <u>BOT 500 IBM 131 11/16</u> (market midpoint)

11:     The COMB sends execution reports to both the retail brokerage firm and the institutional client. It also immediately reports the trades to the consolidated tape and updates all internal databases (including its clearance and settlement files) to reflect the transaction. It also "credits" the originating brokerage with 1/4 of the spread for this trade in order flow remuneration ($1/32^{nd}$ x 500 shares = $15.625).

12:     The COMB immediately decrements the size of the institutional indication (to: BUY 49,500 IBM, 1up to 132 1/4) to reflect the trade, and updates (as needed) its "interest list" at all DOR modules.

While the distribution of price improvement will be different for orders executed on the System than for orders executed at traditional market centers, it is believed that brokerage firms and regulators will view the System favorably if its average price improvement per share (the most pertinent indicator of execution quality for retail orders) compares favorably with that of other execution points. It is expected that the System will achieve such favorable average price-improvement results, and that these will persist, (again, relative to other markets) when spreads narrow as a result of the move to decimal pricing.

In an embodiment of the present invention, a method for the continuous buying and selling of securities includes receiving a plurality of active binding indications to trade securities at non-discrete prices from at least one institution, where each of the active binding indications to trade securities is a non-retail order to trade and the non-discrete prices are determined using national best bid and offer (NBBO) data. The method further includes storing the plurality of active binding indications to trade securities and executing an institution-to-institution trade defined by a first of the plurality of active binding indications to trade securities and a

second of the plurality of active binding indications to trade securities immediately upon receipt of the second of the plurality of active binding indications to trade the security, if the second of the plurality of active binding indications to trade the security is on an opposite side of the first of the plurality of active binding

5 indications to trade the security and the first and second of the plurality of active binding indications to trade securities are from different institutions, wherein the institution-to-institution trade is executed so that each of the first and second active binding indications to trade are anonymous as to a source of the indication and also invisible to all other market participants. The method further includes transmitting

10 information on the plurality of active binding indications to trade securities at non-discrete prices to at least one source of binding orders and receiving at least one query from at least one of the at least one source of binding orders to request an instruction regarding one of the plurality of active binding indications to trade securities. The method further includes transmitting the instruction to the at least

15 one of the at least one source of binding orders, the instruction being to transmit a binding order to trade securities, if the binding order is an opposite side binding order to trade securities which is on an opposite side of the one of the active binding indications to trade securities, or decline the binding order to trade securities. The method further includes receiving the opposite side binding order to trade securities

20 from the at least one source of binding orders, if the instruction was to transmit the opposite side binding order to trade securities, and executing an institution-to-retail trade defined by the one of the plurality of active binding indications to trade securities and the opposite side binding order to trade securities immediately upon receipt of the opposite side binding order to trade securities, wherein the institution-

25 to-retail trade is executed so that the one of the plurality of active binding indications to trade and the opposite side binding order to trade are anonymous as to a source of both the indication and the order and also invisible to all other market participants.

In an alternate embodiment of the previous invention, instruction to transmit

30 the binding order to trade in the previous embodiment includes instructions to either directly route the binding order to trade; or tag the binding order to trade to be subsequently routed by a primary order routing system and forward the tagged binding order to trade to the primary order routing system to be routed.

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In another embodiment of the present invention, a method for the continuous buying and selling of securities includes receiving a plurality of active binding indications to trade securities at non-discrete prices from at least one institution, where each of the active binding indications to trade securities is a non-retail order

5 to trade and the non-discrete prices are determined using national best bid and offer (NBBO) data and storing the plurality of active binding indications to trade securities. The method further includes executing at least one institution-to-institution trade defined by a first of the plurality of active binding indications to trade securities and a second of the plurality of active binding indications to trade

10 securities immediately upon receipt of the second of the plurality of active binding indications to trade securities, if the second of the plurality of active binding indications to trade securities is on an opposite side of the first of the plurality of active binding indications to trade securities and the first and second of the plurality of active binding indications to trade securities are from different institutions,

15 wherein the at least one institution-to-institution trade is executed so that each of the first and second active binding indications to trade are anonymous as to a source of the indication and also invisible to all other market participants. The method further includes receiving at least one binding order to trade securities from at least one source of binding orders and executing at least one institution-to-retail trade defined

20 by one of the plurality of active binding indications to trade securities and one of the at least one binding order to trade securities immediately upon receipt of the one of the at least one binding order to trade securities, if the one of the at least one binding order is an opposite side binding order to trade securities which is on an opposite side of the one of the plurality of active binding indications to trade securities. The

25 method further includes transmitting each unexecuted binding order to trade securities back to the source of the unexecuted binding order to trade securities.

In another embodiment of the present invention, a method for the continuous buying and selling of securities includes receiving a plurality of active binding indications to trade securities at non-discrete prices from at least one institution,

30 where each of the active binding indications to trade securities is a non-retail order to trade and the non-discrete prices are determined using national best bid and offer (NBBO) data and storing the plurality of active binding indications to trade securities. The method further includes executing at least one institution-to-

institution trade defined by a first of the plurality of active binding indications to

trade securities and a second of the plurality of active binding indications to trade

securities immediately upon receipt of the second of the plurality of active binding

indications to trade securities, if the second of the plurality of active binding

5   indications to trade securities is on an opposite side of the first of the plurality of

active binding indications to trade securities and the first and second of the plurality

of active binding indications to trade securities are from different institutions,

wherein the at least one institution-to-institution trade is executed so that each of the

first and second active binding indications to trade are anonymous as to a source of

10   the indication and also invisible to all other market participants. The method further

includes receiving at least one binding order to trade securities from at least one

source of binding orders and executing at least one institution-to-retail trade defined

by one of the plurality of active binding indications to trade securities and one of the

at least one binding order to trade securities immediately upon receipt of the one of

15   the at least one binding order to trade securities, if the one of the at least one binding

order is an opposite side binding order to trade securities which is on an opposite

side of the one of the plurality of active binding indications to trade securities. The

method further includes transmitting each unexecuted binding order to trade

securities to one of an exchange, a market maker, an electronic communications

20   network (ECN), an alternative trading system (ATS), and any other market center.

       In another embodiment of the present invention, a method for the continuous

buying and selling of securities includes receiving a plurality of active binding

indications to trade securities at non-discrete prices from at least one institution,

where each of the active binding indications to trade securities is a non-retail order

25   to trade and the non-discrete prices are determined using national best bid and offer

(NBBO) data and storing the plurality of active binding indications to trade

securities. The method further includes executing at least one institution-to-

institution trade defined by a first of the plurality of active binding indications to

trade securities and a second of the plurality of active binding indications to trade

30   securities immediately upon receipt of the second of the plurality of active binding

indications to trade securities, if the second of the plurality of active binding

indications to trade securities is on an opposite side of the first of the plurality of

active binding indications to trade securities and the first and second of the plurality

of active binding indications to trade securities are from different institutions,

wherein the at least one institution-to-institution trade is executed so that each of the first and second active binding indications to trade are anonymous as to a source of the indication and also invisible to all other market participants. The method further includes receiving at least one binding order to trade securities from at least one

5   source of binding orders and executing at least one institution-to-retail trade defined by one of the plurality of active binding indications to trade securities and one of the at least one binding order to trade securities immediately upon receipt of the one of the at least one binding order to trade securities, if the one of the at least one binding order is an opposite side binding order to trade securities which is on an opposite

10   side of the one of the plurality of active binding indications to trade securities. The method further includes transmitting each unexecuted binding order to trade securities to an order routing service bureau or similar entity for routing to an exchange, a market maker, an electronic communications network (ECN), an alternative trading system (ATS), or any other market center.

15   In another embodiment of the present invention, a method for the continuous buying and selling of securities, including receiving a plurality of active binding indications to trade securities at non-discrete prices from at least one institution, where each of the active binding indications to trade securities is a non-retail order to trade and the non-discrete prices are determined using national best bid and offer

20   (NBBO) data; storing the plurality of active binding indications to trade securities; and executing at least one institution-to-institution trade defined by a first of the plurality of active binding indications to trade securities and a second of the plurality of active binding indications to trade securities immediately upon receipt of the second of the plurality of active binding indications to trade securities, if the second

25   of the plurality of active binding indications to trade securities is on an opposite side of the first of the plurality of active binding indications to trade securities and the first and second of the plurality of active binding indications to trade securities are from different institutions, wherein the at least one institution-to-institution trade is executed so that each of the first and second active binding indications to trade are

30   anonymous as to a source of each indication and also invisible to all other market participants. The method further includes receiving at least one binding order to trade securities from at least one source of binding orders, wherein each of the at least one binding order to trade is a retail marketable order; executing at least one institution-to-retail trade defined by one of the plurality of active binding indications

to trade securities and an opposite side binding order to trade securities immediately upon receipt of the opposite side binding order to trade securities, wherein the at least one institution-to-retail trade is executed so that the first active binding indication to trade and the one of the at least one binding order to trade are

5   anonymous as to a source of each and also invisible to all other market participants; and executing any unexecuted binding orders to trade securities as one of an exchange, a market maker, an electronic communications network (ECN), an alternative trading system (ATS), and an other market center by acting as a principal, an agent or a riskless principal.

10   In another embodiment of the present invention, a method for the continuous buying and selling of securities includes receiving an active first-entity binding indication to trade a security at non-discrete prices, where each of the active binding indications to trade securities is a non-retail order to trade; storing the active first-entity binding indication to trade the security; executing a trade defined by the active

15   first-entity binding indication to trade the security and an active second-entity binding indication to trade the security immediately upon receipt of the active second-entity binding indication to trade the security, if the active second-entity binding indication to trade is on an opposite side of the active first-entity binding indication to trade; and executing a trade defined by the active first-entity binding

20   indication to trade the security and a third-entity binding order to trade the security immediately upon receipt of the third-entity binding order to trade the security, if the active first-entity binding indication to trade the security is on an opposite side of the third-entity binding order to trade the security.

     In another embodiment of the present invention, an article of manufacture

25   comprising a computer-readable medium having stored thereon instructions adapted to be executed by a processor, the instructions which, when executed, define a series of steps to perform the continuous buying and selling of securities, the steps including receiving an active first-entity binding indication to trade a security at non-discrete prices, where each of the active binding indications to trade securities is

30   a non-retail order to trade; storing the active first-entity binding indication to trade the security; executing a trade defined by the active first-entity binding indication to trade the security and an active second-entity binding indication to trade the security immediately upon receipt of the active second-entity binding indication to trade the security, if the active second-entity binding indication to trade is on an opposite side

of the active first-entity binding indication to trade; and executing a trade defined by the active first-entity binding indication to trade the security and a third-entity binding order to trade the security immediately upon receipt of the third-entity binding order to trade the security, if the active first-entity binding indication to

5   trade the security is on an opposite side of the third-entity binding order to trade the security.

In another embodiment of the present invention, a method for the continuous buying and selling of securities includes receiving at least one active first-entity binding indication to trade securities at non-discrete prices each of the active binding

10   indications to trade securities is a non-retail order to trade; storing the at least one active first-entity binding indication to trade securities; transmitting information on the at least one active first-entity binding indication to trade securities at non-discrete prices to be used to determine if a third-entity binding order to trade a security is on an opposite side of at least one of the at least one active first-entity

15   binding indication to trade the security; and executing a trade defined by the at least one of the at least one active first-entity binding indication to trade the security and the third-entity binding order to trade the security immediately upon receipt of the third-entity binding order to trade the security, if the at least one of the at least one active first-entity binding indication to trade the security is on an opposite side of the

20   third-entity binding order to trade the security.

In another embodiment of the present invention, an article of manufacture comprising a computer-readable medium having stored thereon instructions adapted to be executed by a processor, the instructions which, when executed, define a series of steps to perform the continuous buying and selling of securities, the steps

25   including receiving at least one active first-entity binding indication to trade securities at non-discrete prices each of the active binding indications to trade securities is a non-retail order to trade; storing the at least one active first-entity binding indication to trade securities; transmitting information on the at least one active first-entity binding indication to trade securities at non-discrete prices to be

30   used to determine if a third-entity binding order to trade a security is on an opposite side of at least one of the at least one active first-entity binding indication to trade the security; and executing a trade defined by the at least one of the at least one active first-entity binding indication to trade the security and the third-entity binding order to trade the security immediately upon receipt of the third-entity binding order

to trade the security, if the at least one of the at least one active first-entity binding indication to trade the security is on an opposite side of the third-entity binding order to trade the security.

5   In another embodiment of the present invention, a system that facilitates the continuous interaction of marketable orders at non-discrete prices includes a match box component; a financial information exchange (FIX) middleware component connected to the match box component; a marketpoint FIX engine component connected to the FIX middleware converter component and the marketpoint FIX engine component includes at least one external communication port; a DOR proxy

10   component connected to the match box component and the DOR proxy includes at least one external communication port; a data warehouser component connected to the match box component; a clearing and settlement system component connected to the data warehouser component; a trade report scanner component connected to the match box component; a quote feed parser component connected to the match box

15   component; and a monitor graphical user interface (GUI) connected to the match box component.

In another embodiment of the present invention, a system that facilitates the continuous interaction of marketable orders at non-discrete prices, the apparatus including a match box component; a financial information exchange (FIX)

20   middleware component connected to the match box component; a marketpoint FIX engine component connected to the FIX middleware converter component and the marketpoint FIX engine component includes at least one external communication port; a DOR proxy component connected to the match box component and the DOR proxy includes at least one external communication port; a data warehouser

25   component connected to the match box component; a clearing and settlement system component connected to the data warehouser component; a trade report scanner component connected to the match box component; a quote feed parser component connected to the match box component; and a monitor graphical user interface (GUI) connected to the match box component.

30   In another embodiment of the present invention, a DOR to facilitate the continuous interaction of retail and institutional marketable orders at non-discrete prices, which includes a DOR client component to receive marketable retail orders for at least one security and a DOR server component connected to the DOR client component. The DOR server component operates to receive a listing of marketable

institutional orders for at least one security; compare the received listing of
marketable institutional orders with incoming marketable retail orders; transmit a
query requesting at least one instruction, if a matching marketable institutional order
and marketable retail order are found; receive the requested at least one instruction;

5   and route the matched marketable retail order according to the received at least one
instruction.

In another embodiment of the present invention, a crossing network that
facilitates the continuous interaction of marketable retail orders with professional
trading interest at non-discrete prices, includes at least one dynamic order router

10   (DOR) to receive and forward at least one retail order for at least one first instrument
representing either a buy order or a sell order for each of the at least one first
instrument; at least one institutional interface (II) to transmit at least one institutional
order indication for at least one second instrument representing either a buy order or
a sell order for each of the at least one second instrument; and a central order-match

15   box (COMB) connected to each of the at least one DOR and at least one II over a
communications network. The COMB includes a receiving subsystem to
communicate with the at least one DOR and at least one II; a data subsystem to
maintain a listing of the institutional order indications; and a matching subsystem to
match and execute orders on opposite sides for each of the at least one first

20   instrument.

In another embodiment of the present invention, a computer system which
facilitates the continuous interaction of institutional and retail marketable orders at
non-discrete prices, includes a processor system; a random access memory (RAM)
connected to the processor system; a mass memory storage unit connected to the

25   processor system; a communication system connected to the processor system; and
an article of manufacture comprising a computer-readable medium having stored
thereon instructions adapted to be executed by a processor, the instructions which,
when executed, define a series of steps to perform the continuous buying and selling
of securities. The steps include receiving at least one binding indication to trade at

30   least one security at non-discrete prices from at least one institution; storing each of
the at least one active binding indications to trade at least one security; executing a
first trade defined by a first of the at least one active binding indication to trade one
of the at least one security and a second of the at least one active binding indication
to trade the one of the at least one security immediately upon receipt of the second of

the at least one active binding indication to trade, if the second of the at least one active binding indication to trade is on an opposite side from the first of the at least one active binding indication to trade, the security and the first and second of the at least one active binding indications to trade the one of the at least one security are

5   from different institutions, wherein the first trade is executed so that each of the first and second active binding indications to trade are anonymous as to a source of each indication and also invisible to all other market participants; transmitting information on the at least one active binding indication to trade at least one security at non-discrete prices to at least one source of binding orders; and executing a

10   second trade defined by one of the at least one active binding indication to trade the one of the at least one security and a binding order to trade the one of the at least one security immediately upon receipt of the binding order to trade the one of the at least one security, if the active binding indication to trade the one of the at least one security is on an opposite side from the binding order to trade the one of the at least

15   one security, wherein the second trade is executed so that the one of the at least one active binding indication to trade the one of the at least one security and the binding order to trade the one of the at least one security are anonymous as to the source of the active binding indication to trade and a source of the binding order and also invisible to the other market participants.

20   The above embodiments are merely illustrative of the numerous possible embodiments and therefore should not be construed so as to limit the scope of the invention. Therefore, it should be understood that while the present invention has been described mainly in terms of a centralized COMB system, those skilled in the art would recognize that the principles of the invention can be used advantageously with

25   alternative embodiments involving, for example, distributed systems as well. Accordingly, all such implementations, which fall within the spirit and the broad scope of the appended claims, will be embraced by the principles of the present invention.

WHAT IS CLAIMED IS:

1   1.   A method for the continuous buying and selling of securities,

2   comprising:

3   receiving a plurality of active binding indications to trade securities at non-

4   discrete prices from at least one institution, wherein each of said active binding

5   indications to trade securities is a non-retail order to trade and said non-discrete

6   prices are determined using national best bid and offer (NBBO) data;

7   storing said plurality of active binding indications to trade securities;

8   executing an institution-to-institution trade defined by a first of said plurality

9   of active binding indications to trade securities and a second of said plurality of

10   active binding indications to trade securities immediately upon receipt of said

11   second of said plurality of active binding indications to trade said security, if said

12   second of said plurality of active binding indications to trade said security is on an

13   opposite side of said first of said plurality of active binding indications to trade said

14   security and said first and second of said plurality of active binding indications to

15   trade securities are from different institutions, wherein said institution-to-institution

16   trade is executed so that each of said first and second active binding indications to

17   trade are anonymous as to a source of each indication and also invisible to all other

18   market participants;

19   transmitting information on said plurality of active binding indications to

20   trade securities at non-discrete prices to at least one source of binding orders;

21   receiving at least one query from at least one of said at least one source of

22   binding orders to request an instruction regarding a binding order to trade securities,

23   wherein said binding order to trade is a retail marketable order;

24   transmitting said instruction to said at least one of said at least one source of

25   binding orders, said instruction being to transmit said binding order to trade

26   securities, if said binding order is an opposite side binding order to trade securities

27   which is on an opposite side of said one of said active binding indications to trade

28   securities, or decline said binding order to trade securities;

29   receiving said opposite side binding order to trade securities from said at

30   least one source of binding orders, if said instruction was to transmit said opposite

31   side binding order to trade securities; and

32

32 executing an institution-to-retail trade defined by said one of said plurality of

33 active binding indications to trade securities and said opposite side binding order to

34 trade securities immediately upon receipt of said opposite side binding order to trade

35 securities, wherein said institution-to-retail trade is executed so that said one of said

36 plurality of active binding indications to trade and said opposite side binding order

37 to trade are anonymous as to said source of the indication and the at least one source

38 of binding orders and also invisible to said other market participants.

1   2.   The method of claim 1, wherein said instruction to transmit said

2 binding order to trade comprises:

3   directly routing said binding order to trade.

1   3.   The method of claim 1, wherein said instruction to transmit said

2 binding order to trade comprises:

3   tagging said binding order to trade to be subsequently routed by a primary

4 order routing system; and

5   forwarding said tagged binding order to trade to said primary order routing

6 system to be routed.

1   4.   A method for the continuous buying and selling of securities,

2 comprising:

3   receiving a plurality of active binding indications to trade securities at non-

4 discrete prices from at least one institution, wherein each of said active binding

5 indications to trade securities is a non-retail order to trade and said non-discrete

6 prices are determined using national best bid and offer (NBBO) data;

7   storing said plurality of active binding indications to trade securities;

8   executing at least one institution-to-institution trade defined by a first of said

9 plurality of active binding indications to trade securities and a second of said

10 plurality of active binding indications to trade securities immediately upon receipt of

11 said second of said plurality of active binding indications to trade securities, if said

12 second of said plurality of active binding indications to trade securities is on an

13 opposite side of said first of said plurality of active binding indications to trade

14 securities and said first and second of said plurality of active binding indications to

15   trade securities are from different institutions, wherein said at least one institution-

16   to-institution trade is executed so that each of said first and second active binding

17   indications to trade are anonymous as to a source of each indication and also

18   invisible to all other market participants;

19   receiving at least one binding order to trade securities from at least one

20   source of binding orders, wherein each of said at least one binding order to trade is a

21   retail marketable order;

22   executing at least one institution-to-retail trade defined by one of said

23   plurality of active binding indications to trade securities and one of said at least one

24   binding order to trade securities immediately upon receipt of said one of said at least

25   one binding order to trade securities, if said one of said at least one binding order is

26   an opposite side binding order to trade securities which is on an opposite side of said

27   one of said plurality of active binding indications to trade securities, wherein said at

28   least one institution-to-retail trade is executed so that said first active binding

29   indication to trade and said one of said at least one binding order to trade are

30   anonymous as to a source of each and also invisible to all other market participants;

31   and

32   transmitting each unexecuted binding order to trade securities back to the

33   source of the unexecuted binding order to trade securities.

1   5.   A method for the continuous buying and selling of securities,

2   comprising:

3   receiving a plurality of active binding indications to trade securities at non-

4   discrete prices from at least one institution, wherein each of said active binding

5   indications to trade securities is a non-retail order to trade and said non-discrete

6   prices are determined using national best bid and offer (NBBO) data;

7   storing said plurality of active binding indications to trade securities;

8   executing at least one institution-to-institution trade defined by a first of said

9   plurality of active binding indications to trade securities and a second of said

10   plurality of active binding indications to trade securities immediately upon receipt of

11   said second of said plurality of active binding indications to trade securities, if said

12   second of said plurality of active binding indications to trade securities is on an

13   opposite side of said first of said plurality of active binding indications to trade

14   securities and said first and second of said plurality of active binding indications to

15   trade securities are from different institutions, wherein said at least one institution-

16   to-institution trade is executed so that each of said first and second active binding

17   indications to trade are anonymous as to a source of each indication and also

18   invisible to all other market participants;

19   receiving at least one binding order to trade securities from at least one

20   source of binding orders, wherein each of said at least one binding order to trade is a

21   retail marketable order;

22   executing at least one institution-to-retail trade defined by one of said

23   plurality of active binding indications to trade securities and one of said at least one

24   binding order to trade securities immediately upon receipt of said one of said at least

25   one binding order to trade securities, if said one of said at least one binding order is

26   an opposite side binding order to trade securities which is on an opposite side of said

27   one of said plurality of active binding indications to trade securities, wherein said at

28   least one institution-to-retail trade is executed so that said first active binding

29   indication to trade and said one of said at least one binding order to trade are

30   anonymous as to a source of each and also invisible to all other market participants;

31   and

32   transmitting each unexecuted binding order to trade securities to one of an

33   exchange, a market maker, an electronic communications network (ECN), an

34   alternative trading system (ATS), and any other market center.

1   6.   A method for the continuous buying and selling of securities,

2   comprising:

3   receiving a plurality of active binding indications to trade securities at non-

4   discrete prices from at least one institution, wherein each of said active binding

5   indications to trade securities is a non-retail order to trade and said non-discrete

6   prices are determined using national best bid and offer (NBBO) data;

7   storing said plurality of active binding indications to trade securities;

8   executing at least one institution-to-institution trade defined by a first of said

9   plurality of active binding indications to trade securities and a second of said

10   plurality of active binding indications to trade securities immediately upon receipt of

11   said second of said plurality of active binding indications to trade securities, if said

12   second of said plurality of active binding indications to trade securities is on an

13   opposite side of said first of said plurality of active binding indications to trade

14   securities and said first and second of said plurality of active binding indications to

15   trade securities are from different institutions, wherein said at least one institution-

16   to-institution trade is executed so that each of said first and second active binding

17   indications to trade are anonymous as to a source of each indication and also

18   invisible to all other market participants;

19   receiving at least one binding order to trade securities from at least one

20   source of binding orders, wherein each of said at least one binding order to trade is a

21   retail marketable order;

22   executing at least one institution-to-retail trade defined by one of said

23   plurality of active binding indications to trade securities and one of said at least one

24   binding order to trade securities immediately upon receipt of said one of said at least

25   one binding order to trade securities, if said one of said at least one binding order is

26   an opposite side binding order to trade securities which is on an opposite side of said

27   one of said plurality of active binding indications to trade securities, wherein said at

28   least one institution-to-retail trade is executed so that said first active binding

29   indication to trade and said one of said at least one binding order to trade are

30   anonymous as to a source of each and also invisible to all other market participants;

31   and

32   transmitting each unexecuted binding order to trade securities to an order

33   routing service bureau or similar entity for routing to an exchange, a market maker,

34   an electronic communications network (ECN), an alternative trading system (ATS),

35   or any other market center.

1   7.   A method for the continuous buying and selling of securities,

2   comprising:

3   receiving a plurality of active binding indications to trade securities at non-

4   discrete prices from at least one institution, wherein each of said active binding

5   indications to trade securities is a non-retail order to trade and said non-discrete

6   prices are determined using national best bid and offer (NBBO) data;

7   storing said plurality of active binding indications to trade securities;

8   executing at least one institution-to-institution trade defined by a first of said

9   plurality of active binding indications to trade securities and a second of said

10   plurality of active binding indications to trade securities immediately upon receipt of

11   said second of said plurality of active binding indications to trade securities, if said

12   second of said plurality of active binding indications to trade securities is on an

13   opposite side of said first of said plurality of active binding indications to trade

14   securities and said first and second of said plurality of active binding indications to

15   trade securities are from different institutions, wherein said at least one institution-

16   to-institution trade is executed so that each of said first and second active binding

17   indications to trade are anonymous as to a source of each indication and also

18   invisible to all other market participants;

19   receiving at least one binding order to trade securities from at least one

20   source of binding orders, wherein each of said at least one binding order to trade is a

21   retail marketable order;

22   executing at least one institution-to-retail trade defined by one of said

23   plurality of active binding indications to trade securities and an opposite side

24   binding order to trade securities immediately upon receipt of said opposite side

25   binding order to trade securities, wherein said at least one institution-to-retail trade is

26   executed so that said first active binding indication to trade and said one of said at

27   least one binding order to trade are anonymous as to a source of each and also

28   invisible to all other market participants; and

29   executing any unexecuted binding orders to trade securities as one of an

30   exchange, a market maker, an electronic communications network (ECN), an

31   alternative trading system (ATS), and an other market center by acting as a

32   principal, an agent or a riskless principal.

1   8.   An article of manufacture comprising a computer-readable medium

2   having stored thereon instructions adapted to be executed by a processor, the

3   instructions which, when executed, define a series of steps to perform the continuous

4   buying and selling of securities, said steps comprising:

5   receiving a plurality of active binding indications to trade securities at non-

6   discrete prices from at least one institution, wherein each of said active binding

7   indications to trade securities is a non-retail order to trade and said non-discrete

8   prices are determined using national best bid and offer (NBBO) data;

9   storing said plurality of active binding indications to trade securities;

10   executing an institution-to-institution trade defined by a first of said plurality

11 of active binding indications to trade securities and a second of said plurality of

12 active binding indications to trade securities immediately upon receipt of said

13 second of said plurality of active binding indications to trade said security, if said

14 second of said plurality of active binding indications to trade said security is on an

15 opposite side of said first of said plurality of active binding indications to trade said

16 security and said first and second of said plurality of active binding indications to

17 trade securities are from different institutions, wherein said institution-to-institution

18 trade is executed so that each of said first and second active binding indications to

19 trade are anonymous as to a source of each indication and also invisible to all other

20 market participants;

21   transmitting information on said plurality of active binding indications to

22 trade securities at non-discrete prices to at least one source of binding orders;

23   receiving at least one query from at least one of said at least one source of

24 binding orders to request an instruction regarding a binding order to trade securities,

25 wherein said binding order to trade is a retail marketable order;

26   transmitting said instruction to said at least one of said at least one source of

27 binding orders, said instruction being to transmit said binding order to trade

28 securities, if said binding order is an opposite side binding order to trade securities

29 which is on an opposite side of said one of said active binding indications to trade

30 securities, or decline said binding order to trade securities;

31   receiving said opposite side binding order to trade securities from said at

32 least one source of binding orders, if said instruction was to transmit said opposite

33 side binding order to trade securities; and

34   executing an institution-to-retail trade defined by said one of said plurality of

35 active binding indications to trade securities and said opposite side binding order to

36 trade securities immediately upon receipt of said opposite side binding order to trade

37 securities, wherein said institution-to-retail trade is executed so that said one of said

38 plurality of active binding indications to trade and said opposite side binding order

39 to trade are anonymous as to said source of the indication and the at least one source

40 of binding orders and also invisible to said other market participants.

1   9.   The computer-readable medium of claim 8, wherein said instruction

2   to transmit said binding order to trade comprises:

3   directly routing said binding order to trade.

1   10.   The computer-readable medium of claim 8, wherein said instruction

2   to transmit said binding order to trade comprises:

3   tagging said binding order to trade to be subsequently routed by a primary

4   order routing system; and

5   forwarding said tagged binding order to trade to said primary order routing

6   system to be routed.

1   11.   An article of manufacture comprising a computer-readable medium

2   having stored thereon instructions adapted to be executed by a processor, the

3   instructions which, when executed, define a series of steps to perform the continuous

4   buying and selling of securities, said steps comprising:

5   receiving a plurality of active binding indications to trade securities at non-

6   discrete prices from at least one institution, wherein each of said active binding

7   indications to trade securities is a non-retail order to trade and said non-discrete

8   prices are determined using national best bid and offer (NBBO) data;

9   storing said plurality of active binding indications to trade securities;

10   executing at least one institution-to-institution trade defined by a first of said

11 plurality of active binding indications to trade securities and a second of said

12 plurality of active binding indications to trade securities immediately upon receipt of

13 said second of said plurality of active binding indications to trade securities, if said

14 second of said plurality of active binding indications to trade securities is on an

15 opposite side of said first of said plurality of active binding indications to trade

16 securities and said first and second of said plurality of active binding indications to

17 trade securities are from different institutions, wherein said at least one institution-

18 to-institution trade is executed so that each of said first and second active binding

19 indications to trade are anonymous as to a source of each indication and also

20 invisible to all other market participants;

21   receiving at least one binding order to trade securities from at least one

39

22   source of binding orders, wherein each of said at least one binding order to trade is a

23   retail marketable order;

24   executing at least one institution-to-retail trade defined by one of said

25   plurality of active binding indications to trade securities and one of said at least one

26   binding order to trade securities immediately upon receipt of said one of said at least

27   one binding order to trade securities, if said one of said at least one binding order is

28   an opposite side binding order to trade securities which is on an opposite side of said

29   one of said plurality of active binding indications to trade securities, wherein said at

30   least one institution-to-retail trade is executed so that said first active binding

31   indication to trade and said one of said at least one binding order to trade are

32   anonymous as to a source of each and also invisible to all other market participants;

33   and

34   transmitting each unexecuted binding order to trade securities back to the

35   source of the unexecuted binding order to trade securities.

1   12.   An article of manufacture comprising a computer-readable medium

2   having stored thereon instructions adapted to be executed by a processor, the

3   instructions which, when executed, define a series of steps to perform the continuous

4   buying and selling of securities, said steps comprising:

5   receiving a plurality of active binding indications to trade securities at non-

6   discrete prices from at least one institution, wherein each of said active binding

7   indications to trade securities is a non-retail order to trade and said non-discrete

8   prices are determined using national best bid and offer (NBBO) data;

9   storing said plurality of active binding indications to trade securities;

10   executing at least one institution-to-institution trade defined by a first of said

11   plurality of active binding indications to trade securities and a second of said

12   plurality of active binding indications to trade securities immediately upon receipt of

13   said second of said plurality of active binding indications to trade securities, if said

14   second of said plurality of active binding indications to trade securities is on an

15   opposite side of said first of said plurality of active binding indications to trade

16   securities and said first and second of said plurality of active binding indications to

17   trade securities are from different institutions, wherein said at least one institution-

18   to-institution trade is executed so that each of said first and second active binding

19   indications to trade are anonymous as to a source of each indication and also

20   invisible to all other market participants;

21   receiving at least one binding order to trade securities from at least one

22   source of binding orders, wherein each of said at least one binding order to trade is a

23   retail marketable order;

24   executing at least one institution-to-retail trade defined by one of said

25   plurality of active binding indications to trade securities and one of said at least one

26   binding order to trade securities immediately upon receipt of said one of said at least

27   one binding order to trade securities, if said one of said at least one binding order is

28   an opposite side binding order to trade securities which is on an opposite side of said

29   one of said plurality of active binding indications to trade securities, wherein said at

30   least one institution-to-retail trade is executed so that said first active binding

31   indication to trade and said one of said at least one binding order to trade are

32   anonymous as to a source of each and also invisible to all other market participants;

33   and

34   transmitting each unexecuted binding order to trade securities to one of an

35   exchange, a market maker, an electronic communications network (ECN), an

36   alternative trading system (ATS), and any other market center.

1   13.   An article of manufacture comprising a computer-readable medium

2   having stored thereon instructions adapted to be executed by a processor, the

3   instructions which, when executed, define a series of steps to perform the continuous

4   buying and selling of securities, said steps comprising:

5   receiving a plurality of active binding indications to trade securities at non-

6   discrete prices from at least one institution, wherein each of said active binding

7   indications to trade securities is a non-retail order to trade and said non-discrete

8   prices are determined using national best bid and offer (NBBO) data;

9   storing said plurality of active binding indications to trade securities;

10   executing at least one institution-to-institution trade defined by a first of said

11   plurality of active binding indications to trade securities and a second of said

12   plurality of active binding indications to trade securities immediately upon receipt of

13   said second of said plurality of active binding indications to trade securities, if said

14   second of said plurality of active binding indications to trade securities is on an

15   opposite side of said first of said plurality of active binding indications to trade

16   securities and said first and second of said plurality of active binding indications to

17   trade securities are from different institutions, wherein said at least one institution-

18   to-institution trade is executed so that each of said first and second active binding

19   indications to trade are anonymous as to a source of each indication and also

20   invisible to all other market participants;

21   receiving at least one binding order to trade securities from at least one

22   source of binding orders, wherein each of said at least one binding order to trade is a

23   retail marketable order;

24   executing at least one institution-to-retail trade defined by one of said

25   plurality of active binding indications to trade securities and one of said at least one

26   binding order to trade securities immediately upon receipt of said one of said at least

27   one binding order to trade securities, if said one of said at least one binding order is

28   an opposite side binding order to trade securities which is on an opposite side of said

29   one of said plurality of active binding indications to trade securities, wherein said at

30   least one institution-to-retail trade is executed so that said first active binding

31   indication to trade and said one of said at least one binding order to trade are

32   anonymous as to a source of each and also invisible to all other market participants;

33   and

34   transmitting each unexecuted binding order to trade securities to an order

35   routing service bureau or similar entity for routing to an exchange, a market maker,

36   an electronic communications network (ECN), an alternative trading system (ATS),

37   or any other market center.

1   14.   An article of manufacture comprising a computer-readable medium

2   having stored thereon instructions adapted to be executed by a processor, the

3   instructions which, when executed, define a series of steps to perform the continuous

4   buying and selling of securities, said steps comprising:

5   receiving a plurality of active binding indications to trade securities at non-

6   discrete prices from at least one institution, wherein each of said active binding

7   indications to trade securities is a non-retail order to trade and said non-discrete

8   prices are determined using national best bid and offer (NBBO) data;

9   storing said plurality of active binding indications to trade securities;

10   executing at least one institution-to-institution trade defined by a first of said

11   plurality of active binding indications to trade securities and a second of said

12   plurality of active binding indications to trade securities immediately upon receipt of

13   said second of said plurality of active binding indications to trade securities, if said

14   second of said plurality of active binding indications to trade securities is on an

15   opposite side of said first of said plurality of active binding indications to trade

16   securities and said first and second of said plurality of active binding indications to

17   trade securities are from different institutions, wherein said at least one institution-

18   to-institution trade is executed so that each of said first and second active binding

19   indications to trade are anonymous as to a source of each indication and also

20   invisible to all other market participants;

21   receiving at least one binding order to trade securities from at least one

22   source of binding orders, wherein each of said at least one binding order to trade is a

23   retail marketable order;

24   executing at least one institution-to-retail trade defined by one of said

25   plurality of active binding indications to trade securities and an opposite side

26   binding order to trade securities immediately upon receipt of said opposite side

27   binding order to trade securities, wherein said at least one institution-to-retail trade is

28   executed so that said first active binding indication to trade and said one of said at

29   least one binding order to trade are anonymous as to a source of each and also

30   invisible to all other market participants; and

31   executing any unexecuted binding orders to trade securities as one of an

32   exchange, a market maker, an electronic communications network (ECN), an

33   alternative trading system (ATS), and an other market center by acting as a

34   principal, an agent or a riskless principal.

1   15.   A method for the continuous buying and selling of securities,

2   comprising:

3   receiving an active first-entity binding indication to trade a security at non-

4   discrete prices;

5   storing said active first-entity binding indication to trade said security;

6   executing a trade defined by said active first-entity binding indication to

7   trade said security and an active second-entity binding indication to trade said

8   security immediately upon receipt of said active second-entity binding indication to

9   trade said security, if said active second-entity binding indication to trade is on an

10   opposite side of said active first-entity binding indication to trade; and

11   executing a trade defined by said active first-entity binding indication to

12   trade said security and a third-entity binding order to trade said security immediately

13   upon receipt of said third-entity binding order to trade said security, if said active

14   first-entity binding indication to trade said security is on an opposite side of said

15   third-entity binding order to trade said security.

1   16.   The method of claim 15, wherein the trades defined by said active

2   first-entity and said active second-entity binding indications and the trades defined

3   by said active first-entity binding indication and said third-entity binding order to

4   trade said security are executed by a sponsor acting as an agent or as a riskless

5   principal.

1   17.   The method of claim 16, wherein said sponsor is a registered broker

2   dealer which serves as a counter-party for all trades, so that the identities of the

3   sources of the active first-entity binding indication, the active second-entity binding

4   indication and the third-entity binding order to trade said security are anonymous to

5   each other during a clearance and settlement process.

1   18.   The method of claim 16, wherein said sponsor is a source of one or

2   more of said active first-entity binding indication to trade, of said active second-

3   entity binding indication to trade, and of said third-entity binding order to trade.

1   19.   The method of claim 15, wherein storing said active first-entity

2   binding indication to trade said security comprises:

3   storing said active first-entity binding indication to trade said security in a

4   central database.

1   20.   The method of claim 15, wherein said active first-entity binding

2   indication to trade and said active second-entity binding indication to trade each

3   comprise:

4   a trading symbol representing said security;

5   a side for said trade of said security, wherein said side is defined as either a

6   buy or a sell; and

7   a quantity representing a number of shares of said security to be traded.

1   21.   The method of claim 20, wherein each of said active first-entity

2   binding indication to trade and said active second-entity binding indication to trade

3   further comprise:

4   a price limit.

1   22.   The method of claim 15, wherein each of said active first-entity

2   binding indication to trade and said active second-entity binding indication to trade

3   are invisible to all other market participants such that neither said active first-entity

4   binding indication to trade nor said active second-entity binding indication to trade

5   are displayed on any terminal or in any quotation.

1   23.   The method of claim 15, wherein said third-entity binding order to

2   trade comprises at least:

3   a trading symbol representing said security;

4   a side for said trade of said security;

5   a quantity representing a number of shares of said security to be traded; and

6   an order type selected from at least a post-open market order and a

7   marketable limit order.

1   24.   The method of claim 15, wherein each of said active first-entity

2   binding indication to trade and said third-entity binding order to trade are invisible to

3   all other market participants such that neither said active first-entity binding

4   indication to trade nor said third-entity binding order to trade are displayed on any

5   terminal or in any quotation.

1   25.   The method of claim 15, wherein said securities are selected from the

2   group comprising at least:

3   a stock;

4   a share;

5   an equity;

6   a derivative;

7   a warrant;

8   an option; and

9   a bond.

1   26.   The method of claim 15, wherein an opposite side of a sell indication

2   is defined as a buy order or a buy indication and an opposite side of a buy indication

3   is defined as a sell order or said sell indication.

1   27.   The method of claim 15, wherein said executing said trade defined by

2   said active first-entity binding indication to trade said security and said active

3   second-entity binding indication to trade said security can result in at least one of

4   said active first-entity indication and said active second-entity indication being

5   partially filled.

1   28.   The method of claim 15, wherein said executing said trade defined by

2   said active first-entity binding indication to trade said security and said third-entity

3   binding order to trade said security can result in one or both of said active first-entity

4   indication or said third-entity binding order being partially filled.

1   29.   The method of claim 15, further comprising:

2   executing a trade defined by a plurality of active first-entity binding

3   indications to trade said security and said active second-entity binding indication to

4   trade said security immediately upon receipt of said active second-entity binding

5   indication to trade said security, if said active second-entity binding indication to

6   trade is on an opposite side of said plurality of active first-entity binding indications

7   to trade;

8   executing a trade defined by said active first-entity binding indication to

9   trade said security and a plurality of active second-entity binding indications to trade

10   said security immediately upon receipt of said plurality of active second-entity

11   binding indications to trade said security, if said plurality of active second-entity

12   binding indications to trade are on an opposite side of said active first-entity binding

13   indication to trade;

14   executing a trade defined by a plurality of active first-entity binding

15   indications to trade said security and a third-entity binding order to trade said

16   security immediately upon receipt of said third-entity binding order to trade said

17   security, if said third-entity binding order to trade is on an opposite side of said

18   plurality of active first-entity binding indications to trade; and

19   executing a trade defined by said active first-entity binding indication to

20   trade said security and a plurality of third-entity binding orders to trade said security

21   immediately upon receipt of said plurality of third-entity binding orders to trade said

22   security, if said plurality of third-entity binding orders to trade are on an opposite

23   side of said active first-entity binding indication to trade said security.

1   30.   The method of claim 29, wherein said executing said trade defined by

2   said plurality of active first-entity binding indications to trade said security and said

3   active second-entity binding indication to trade said security can result in at least one

4   of said plurality of active first-entity indications and said active second-entity

5   indication being partially filled;

6   said executing said trade defined by said active first-entity binding

7   indications to trade said security and said plurality of active second-entity binding

8   indication to trade said security can result in at least one of said active first-entity

9   indications and said plurality of active second-entity indication being partially filled;

10   said executing said trade defined by said plurality of active first-entity

11   binding indications to trade said security and said third-entity binding order to trade

12   said security can result in at least one of said plurality of active first-entity

13   indications and said third-entity binding order being partially filled; and

14   said executing said trade defined by said active first-entity binding

15   indications to trade said security and said plurality of third-entity binding orders to

16   trade said security can result in at least one of said active first-entity indication and

17   said plurality of third-entity binding orders being partially filled.

1   31.   The method of claim 15, wherein each of said active first-entity

2 binding indication to trade and said active second-entity binding indication to trade

3 is a binding non-retail order to trade.

1   32.   The method of claim 15, wherein said third-entity binding

2 order to trade is a retail marketable order.

1   33.   The method of claim 32, wherein said retail marketable order

2 is selected from the group comprising:

3   a buy order with a limit price that is greater than or equal to the national best

4 offer for said security;

5   a sell order with a limit price that is less than or equal to the national best bid

6 for said security; and

7   a post open market order to buy or sell said security.

1   34.   The method of claim 15, wherein said active first-entity binding

2 indication to trade and said active second-entity binding indication to trade can

3 change between being active and inactive, depending on at least one factor, said

4 factor being selected from the group including at least:

5   a first optional price limit associated with said active first-entity binding

6 indication to trade in relation to said non-discrete prices; and

7   a second optional price limit associated with said active second-entity

8 binding indication to trade in relation to said non-discrete prices.

1   35.   The method of claim 15, wherein executing a trade defined by said

2 active first-entity binding indication to trade said security and said active second-

3 entity binding indication to trade said security comprises:

4   matching said active first-entity binding indication to trade said security with

5 an opposite side active second-entity binding indication to trade said security

6 immediately upon receipt of said opposite side second-binding indication to trade;

7 and

8   executing the trade defined by the matched said active first-entity binding

9 indication to trade said security and said opposite side active second-entity binding

10   indication to trade said security.

1   36.   The method of claim 15, wherein executing a trade defined by said

2   active first-entity binding indication to trade said security and said third-entity

3   binding order to trade said security comprises:

4   matching said active first-entity binding indication to trade said security with

5   an opposite side third-entity binding order to trade said security immediately upon

6   receipt of said opposite side third-entity binding order to trade; and

7   executing the trade defined by the matched said active first-entity binding

8   indication to trade said security and said opposite side third-entity binding order to

9   trade said security.

1   37.   The method of claim 15, wherein said third-entity binding order to

2   trade can be received from at least one source of said third-entity binding orders to

3   trade or at least one intermediary, wherein said intermediary receives said at least

4   one third-entity binding order from one of said at least one source of said third-entity

5   binding orders to trade.

1   38.   The method of claim 37, wherein receiving said third-entity binding

2   order to trade from said intermediary comprises:

3   receiving said third-entity binding order to trade from an order routing

4   service bureau, an electronic communications network (ECN), or any other

5   processor or aggregator of orders which communicates with at least one source of

6   said third-entity binding orders.

1   39.   The method of claim 19, further comprising:

2   reporting the executed trades; and

3   updating said central database to reflect the executed trades.

1   40.   The method of claim 39, further comprising:

2   transmitting updated information from said updated central database on said

3   active first-entity binding indication to trade said security at non-discrete prices to be

4   used to determine if said third-entity binding order to trade said security is on the

5   opposite side of said active first-entity binding indication to trade said security.

1   41.   The method of claim 15, further comprising:

2   receiving at least one fee for the executed trade; and

3   transmitting a payment to a source of said third-entity binding order, if the

4   executed trade included said third-entity binding order to trade.

1   42.   The method of 41, wherein said receiving at least one fee for the

2   executed trade comprises:

3   receiving a first fee from a source of said active first-entity binding

4   indication for the executed trade, if said trade is defined by said active first-entity

5   binding indication to trade said security and a third-entity binding order to trade said

6   security; and

7   receiving said first fee from said source of said active first-entity binding

8   indication and a second fee from a source of said active second-entity binding

9   indication, for the executed trade, if said trade is defined by said active first-entity

10   binding indication to trade said security and said active second-entity binding

11   indication to trade said security.

1   43.   The method of claim 15, further comprising:

2   determining said non-discrete prices using national best bid and offer

3   (NBBO) data for said security.

1   44.   The method of claim 43, wherein said determining said non-discrete

2   prices using national best bid and offer (NBBO) data for said security comprises:

3   determining an execution price for a third-entity buy order for said security

4   to be equal to one-quarter of an NBBO spread less than the national best offer for

5   said security;

6   determining an execution price for a third-entity sell order for said security to

7   be equal to one-quarter of the NBBO spread more than the national best bid for said

8   security; and

9   determining an execution price for said first-entity and second-entity binding

10   indications to buy or sell said security to be equal to a midpoint of the NBBO spread

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11   for said security.

1   45.   The method of claim 15, further comprising:
2   transmitting information on said active first-entity binding indication to trade
3   said security at non-discrete prices, said information to be used to determine if said
4   third-entity binding order to trade said security is on the opposite side of said active
5   first-entity binding indication to trade said security.

1   46.   The method of claim 45, wherein transmitting information on said
2   active first-entity binding indication to trade said security at non-discrete prices, said
3   information to be used to determine if said third-entity binding order to trade said
4   security is on the opposite side of said active first-entity binding indication to trade
5   said security comprises:
6   transmitting a security trading symbol for said security; and
7   transmitting a trading side for said security.

1   47.   The method of claim 46, wherein transmitting information on said
2   active first-entity binding indication to trade said security at non-discrete prices, said
3   information to be used to determine if said third-entity binding order to trade said
4   security is on the opposite side of said active first-entity binding indication to trade
5   said security further comprises:
6   transmitting national best bid and offer (NBBO) data for said security.

1   48.   The method of claim 15, wherein said executing a trade defined by
2   said first-entity binding indication to trade said security and said third-entity binding
3   order to trade said security immediately upon receipt of said third-entity binding
4   order comprises:
5   receiving a query requesting instructions regarding said third-entity binding
6   order to trade;
7   determining whether to request said third-entity binding order to trade;
8   providing a response to said received query;
9   executing said trade immediately upon receipt of said third-entity binding
10   order.

1   49.   The method of claim 48, wherein said providing said response to said

2   received query comprises:

3   transmitting an instruction to either:

4   transmit said third-entity binding order to trade; or

5   decline said third-entity binding order to trade.

1   50.   The method of claim 49, wherein said instruction to decline said

2   third-entity binding order to trade results in said third-entity binding order to trade

3   being automatically routed to one of an alternate exchange, an electronic

4   communications network (ECN), a market maker, and any other market center.

1   51.   The method of claim 49, wherein said instruction to transmit said

2   third-entity binding order to trade only occurs when an active offsetting first-entity

3   binding indication to trade is available.

1   52.   The method of claim 48, wherein said executing said trade

2   immediately upon receipt of said third-entity binding order comprises:

3   receiving said third-entity binding order to trade;

4   matching said third-entity binding order to trade with an opposite side first-

5   entity binding indication to trade; and

6   executing the trade defined by said third-entity binding order to trade and

7   said opposite side first-entity binding indication to trade.

1   53.   The method of claim 48, wherein a plurality of said opposite side

2   first-entity binding indications to trade are available and wherein said executing said

3   trade immediately upon receipt of said third-entity binding order comprises:

4   receiving said third-entity binding order to trade;

5   matching said third-entity binding order to trade with at least one of said

6   plurality of said opposite side first-entity binding indications to trade; and

7   executing the trade defined by said third-entity binding order to trade and

8   said at least one of said plurality of said opposite side first-entity binding indications

9   to trade.

1   54.   The method of claim 49, wherein said transmit said third-entity
2   binding order to trade comprises:
3   directly routing said third-entity binding order to trade.

1   55.   The method of claim 49, wherein said transmit said third-entity
2   binding order to trade comprises:
3   tagging said third-entity binding order to trade to be subsequently routed by a
4   primary order routing system; and
5   forwarding said tagged third-entity binding order to trade to said primary
6   order routing system to be routed.

1   56.   The method of claim 15, further comprising:
2   returning said third-entity binding order to trade said security at non-discrete
3   prices if an opposite side active first-entity binding indication to trade said security
4   is unavailable.

1   57.   The method of claim 15, further comprising:
2   transmitting said third-entity binding order to trade said security at non-
3   discrete prices to one of an exchange, a market maker, an electronic communications
4   network (ECN), an alternative trading system (ATS), and any other market center, if
5   said opposite active first-entity binding indication to trade said security is
6   unavailable.

1   58.   The method of claim 15, further comprising:
2   transmitting said third-entity binding order to trade said security at non-
3   discrete prices to an order routing service bureau or an order flow aggregator to be
4   routed to an exchange, a market maker, an electronic communications network
5   (ECN), an alternative trading system (ATS), or any other market center, if said
6   opposite side active first-entity binding indication to trade said security is
7   unavailable.

1   59.   The method of claim 15, further comprising:

2   executing said third-entity binding order to trade said security at non-discrete

3 prices as an exchange, a market maker, an electronic communications network

4 (ECN), an alternative trading system (ATS), or any other market center by acting as

5 a principal, an agent or a riskless principal, if said opposite side active first-entity

6 binding indication to trade said security is unavailable.

1   60.   An article of manufacture comprising a computer-readable medium

2 having stored thereon instructions adapted to be executed by a processor, the

3 instructions which, when executed, define a series of steps to perform the continuous

4 buying and selling of securities, said steps comprising:

5   receiving an active first-entity binding indication to trade a security at non-

6 discrete prices;

7   storing said active first-entity binding indication to trade said security;

8   executing a trade defined by said active first-entity binding indication to

9 trade said security and an active second-entity binding indication to trade said

10 security immediately upon receipt of said active second-entity binding indication to

11 trade said security, if said active second-entity binding indication to trade is on an

12 opposite side of said active first-entity binding indication to trade; and

13   executing a trade defined by said active first-entity binding indication to

14 trade said security and a third-entity binding order to trade said security immediately

15 upon receipt of said third-entity binding order to trade said security, if said active

16 first-entity binding indication to trade said security is on an opposite side of said

17 third-entity binding order to trade said security.

1   61.   The computer-readable medium of claim 60, wherein the trades

2 defined by said active first-entity and said active second-entity binding indications

3 and the trades defined by said active first-entity binding indication and said third-

4 entity binding order to trade said security are executed by a sponsor acting as an

5 agent or as a riskless principal.

1   62.   The computer-readable medium of claim 61, wherein said sponsor is

2   a registered broker dealer which serves as a counter-party for all trades, so that the

3   identities of the sources of the active first-entity binding indication, the active

4   second-entity binding indication and the third-entity binding order to trade said

5   security are anonymous to each other during a clearance and settlement process.

1   63.   The computer-readable medium of claim 61, wherein said sponsor is

2   a source of one or more of said active first-entity binding indication to trade, of said

3   active second-entity binding indication to trade, and of said third-entity binding

4   order to trade.

1   64.   The computer-readable medium of claim 60, wherein storing said

2   active first-entity binding indication to trade said security comprises:

3   storing said active first-entity binding indication to trade said security in a

4   central database.

1   65.   The computer-readable medium of claim 60, wherein said active first-

2   entity binding indication to trade and said active second-entity binding indication to

3   trade each comprise:

4   a trading symbol representing said security;

5   a side for said trade of said security, wherein said side is defined as

6   either a buy or a sell; and

7   a quantity representing a number of shares of said security to be

8   traded.

1   66.   The computer-readable medium of claim 65, wherein each of said

2   active first-entity binding indication to trade and said active second-entity binding

3   indication to trade further comprise:

4   a price limit.

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1   67.   The computer-readable medium of claim 60, wherein each of said

2   active first-entity binding indication to trade and said active second-entity binding

3   indication to trade are invisible to all other market participants such that neither said

4   active first-entity binding indication to trade nor said active second-entity binding

5   indication to trade are displayed on any terminal or in any quotation.

1   68.   The computer-readable medium of claim 60, wherein said third-entity

2   binding order to trade comprises at least:

3   a trading symbol representing said security;

4   a side for said trade of said security;

5   a quantity representing a number of shares of said security to be

6   traded; and

7   an order type selected from at least a post-open market order and a

8   marketable limit order.

1   69.   The computer-readable medium claim 60, wherein each of said active

2   first-entity binding indication to trade and said third-entity binding order to trade are

3   invisible to all other market participants such that neither said active first-entity

4   binding indication to trade nor said third-entity binding order to trade are displayed

5   on any terminal or in any quotation.

1   70.   The computer-readable medium of claim 60, wherein said securities

2   are selected from the group comprising at least:

3   a stock;

4   a share;

5   an equity;

6   a derivative;

7   a warrant;

8   an option; and

9   a bond.

1   71.   The computer-readable medium of claim 60, wherein an opposite side

2   of a sell indication is defined as a buy order or a buy indication and said opposite

3   side of a buy indication is defined as a sell order or said sell indication.

1   72.   The computer-readable medium of claim 60, wherein said executing

2   said trade defined by said active first-entity binding indication to trade said security

3   and said active second-entity binding indication to trade said security can result in at

4   least one of said active first-entity indication and said active second-entity indication

5   being partially filled.

1   73.   The computer-readable medium of claim 60, wherein said executing

2   said trade defined by said active first-entity binding indication to trade said security

3   and said third-entity binding order to trade said security can result in one or both of

4   said active first-entity indication or said third-entity binding order being partially

5   filled.

1   74.   The computer-readable medium of claim 60, said steps further

2   comprising:

3   executing a trade defined by a plurality of active first-entity binding

4   indications to trade said security and said active second-entity binding indication to

5   trade said security immediately upon receipt of said active second-entity binding

6   indication to trade said security, if said active second-entity binding indication to

7   trade is on an opposite side of said plurality of active first-entity binding indications

8   to trade;

9   executing a trade defined by said active first-entity binding indication to

10   trade said security and a plurality of active second-entity binding indications to trade

11   said security immediately upon receipt of said plurality of active second-entity

12   binding indications to trade said security, if said plurality of active second-entity

13   binding indications to trade are on an opposite side of said active first-entity binding

14   indication to trade;

15   executing a trade defined by a plurality of active first-entity binding

16   indications to trade said security and a third-entity binding order to trade said

17   security immediately upon receipt of said third-entity binding order to trade said

18   security, if said third-entity binding order to trade is on an opposite side of said

19   plurality of active first-entity binding indications to trade; and

20   executing a trade defined by said active first-entity binding indication to

21   trade said security and a plurality of third-entity binding orders to trade said security

22   immediately upon receipt of said plurality of third-entity binding orders to trade said

23   security, if said plurality of third-entity binding orders to trade are on an opposite

24   side of said active first-entity binding indication to trade said security.

1   75.   The computer-readable medium of claim 74, wherein said executing

2   said trade defined by said plurality of active first-entity binding indications to trade

3   said security and said active second-entity binding indication to trade said security

4   can result in at least one of said plurality of active first-entity indications and said

5   active second-entity indication being partially filled;

6   said executing said trade defined by said active first-entity binding

7   indications to trade said security and said plurality of active second-entity binding

8   indication to trade said security can result in at least one of said active first-entity

9   indications and said plurality of active second-entity indication being partially filled;

10   said executing said trade defined by said plurality of active first-entity

11   binding indications to trade said security and said third-entity binding order to trade

12   said security can result in at least one of said plurality of active first-entity

13   indications and said third-entity binding order being partially filled; and

14   said executing said trade defined by said active first-entity binding

15   indications to trade said security and said plurality of third-entity binding orders to

16   trade said security can result in at least one of said active first-entity indication and

17   said plurality of third-entity binding orders being partially filled.

1   76.   The computer-readable medium of claim 60, wherein each of said

2   active first-entity binding indication to trade and said active second-entity binding

3   indication to trade is a binding non-retail order to trade.

1   77.   The computer-readable medium of claim 60, wherein said third-entity

2   binding order to trade is a retail marketable order.

1   78.   The computer-readable medium of claim 77, wherein said retail

2   marketable order is selected from the group comprising:

3   a buy order with a limit price that is greater than or equal to the national best

4   offer for said security;

5   a sell order with a limit price that is less than or equal to the national best bid

6   for said security; and

7   a post open market order to buy or sell said security.

1   79.   The computer-readable medium of claim 60, wherein said active first-

2   entity binding indication to trade and said active second-entity binding indication to

3   trade can change between being active and inactive, depending on at least one

4   factor, said factor being selected from the group comprising at least:

5   a first optional price limit associated with said active first-entity binding

6   indication to trade in relation to said non-discrete prices; and

7   a second optional price limit associated with said active second-entity

8   binding indication to trade in relation to said non-discrete prices.

1   80.   The computer-readable medium of claim 60, wherein executing a

2   trade defined by said active first-entity binding indication to trade said security and

3   said active second-entity binding indication to trade said security comprises:

4   matching said active first-entity binding indication to trade said security with

5   an opposite side active second-entity binding indication to trade said security

6   immediately upon receipt of said opposite side second-binding indication to trade;

7   and

8   executing the trade defined by the matched said active first-entity binding

9   indication to trade said security and said opposite side active second-entity binding

10 indication to trade said security.

1   81.   The computer-readable medium of claim 60, wherein executing a

2   trade defined by said active first-entity binding indication to trade said security and

3   said third-entity binding order to trade said security comprises:

4   matching said active first-entity binding indication to trade said security with

5   an opposite side third-entity binding order to trade said security immediately upon

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6   receipt of said opposite side third-entity binding order to trade; and

7   executing the trade defined by the matched said active first-entity binding

8   indication to trade said security and said opposite side third-entity binding order to

9   trade said security.

1   82.   The computer-readable medium of claim 60, wherein said third-entity

2   binding order to trade can be received from at least one source of said third-entity

3   binding orders to trade or at least one intermediary, wherein said intermediary

4   receives said at least one third-entity binding order from one of said at least one

5   source of said third-entity binding orders to trade.

1   83.   The computer-readable medium of claim 82, wherein receiving said

2   third-entity binding order to trade from said intermediary comprises:

3   receiving said third-entity binding order to trade from an order routing

4   service bureau, an electronic communications network (ECN), or any other

5   processor or aggregator of orders which communicates with at least one source of

6   said third-entity binding orders.

1   84.   The computer-readable medium of claim 79, said steps further

2   comprising:

3   reporting the executed trades; and

4   updating said central database to reflect the executed trades.

1   85.   The computer-readable medium of claim 84, said steps further

2   comprising:

3   transmitting updated information from said updated central database on said

4   active first-entity binding indication to trade said security at non-discrete prices to be

5   used to determine if said third-entity binding order to trade said security is on the

6   opposite side of said active first-entity binding indication to trade said security.

1   86.   The computer-readable medium of claim 60, said steps further

2   comprising:

3   receiving at least one fee for the executed trade; and

4   transmitting a payment to a source of said third-entity binding order, if the

5   executed trade included said third-entity binding order to trade.

1   87.   The computer-readable medium of 86, wherein said receiving at least

2   one fee for the executed trade comprises:

3   receiving a first fee from a source of said active first-entity binding

4   indication for the executed trade, if said trade is defined by said active first-entity

5   binding indication to trade said security and a third-entity binding order to trade said

6   security; and

7   receiving said first fee from said source of said active first-entity binding

8   indication and a second fee from a source of said active second-entity binding

9   indication for the executed trade, if said trade is defined by said active first-entity

10   binding indication to trade said security and said active second-entity binding

11   indication to trade said security.

1   88.   The computer-readable medium of claim 60, said steps further

2   comprising:

3   determining said non-discrete prices using national best bid and offer

4   (NBBO) data for said security.

1   89.   The computer-readable medium of claim 88, wherein said

2   determining said non-discrete prices using national best bid and offer (NBBO) data

3   for said security comprises:

4   determining an execution price for a third-entity buy order for said security

5   to be equal to one-quarter of an NBBO spread less than the national best offer for

6   said security;

7   determining an execution price for a third-entity sell order for said security to

8   be equal to one-quarter of the NBBO spread more than the national best bid for said

9   security; and

10   determining an execution price for said first-entity and second-entity binding

11 indications to buy or sell said security to be are equal to a midpoint of the NBBO

12 spread for said security.

1 90. The computer-readable medium of claim 60, said steps further

2 comprising:

3 transmitting information on said active first-entity binding indication to trade

4 said security at non-discrete prices, said information to be used to determine if said

5 third-entity binding order to trade said security is on the opposite side of said active

6 first-entity binding indication to trade said security.

1 91. The computer-readable medium of claim 90, wherein transmitting

2 information on said active first-entity binding indication to trade said security at

3 non-discrete prices, said information to be used to determine if said third-entity

4 binding order to trade said security is on the opposite side of said active first-entity

5 binding indication to trade said security comprises:

6 transmitting a security trading symbol for said security; and

7 transmitting a trading side for said security.

1 92. The computer-readable medium of claim 91, wherein transmitting

2 information on said active first-entity binding indication to trade said security at

3 non-discrete prices, said information to be used to determine if said third-entity

4 binding order to trade said security is on the opposite side of said active first-entity

5 binding indication to trade said security further comprises:

6 transmitting national best bid and offer (NBBO) data for said security.

1 93. The computer-readable medium of claim 60, wherein said executing a

2 trade defined by said first-entity binding indication to trade said security and said

3 third-entity binding order to trade said security immediately upon receipt of said

4 third-entity binding order comprises:

5 receiving a query requesting instructions regarding said third-entity binding

6 order to trade;

7 determining whether to request said third-entity binding order to trade;

8 providing a response to said received query;

9   executing said trade immediately upon receipt of said third-entity binding

10   order.

1   94.   The computer-readable medium of claim 93, wherein said providing

2   said response to said received query comprises:

3   transmitting an instruction to either:

4   transmit said third-entity binding order to trade; or

5   decline said third-entity binding order to trade.

1   95.   The computer-readable medium of claim 94, wherein said instruction

2   to decline said third-entity binding order to trade results in said third-entity binding

3   order to trade being automatically routed to one of an alternate exchange, an

4   electronic communications network (ECN), a market maker, and any other market

5   center.

1   96.   The computer-readable medium of claim 94, wherein said instruction

2   to transmit said third-entity binding order to trade only occurs when an active

3   offsetting first-entity binding indication to trade is available.

1   97.   The computer-readable medium of claim 93, wherein said executing

2   said trade immediately upon receipt of said third-entity binding order comprises:

3   receiving said third-entity binding order to trade;

4   matching said third-entity binding order to trade with an opposite side first-

5   entity binding indication to trade; and

6   executing the trade defined by said third-entity binding order to trade and

7   said opposite side first-entity binding indication to trade.

1   98.   The computer-readable medium of claim 93, wherein a plurality of

2   said opposite side first-entity binding indications to trade are available and wherein

3   said executing said trade immediately upon receipt of said third-entity binding order

4   comprises:

5   receiving said third-entity binding order to trade;

6   matching said third-entity binding order to trade with at least one of said

7   plurality of said opposite side first-entity binding indications to trade; and

8   executing the trade defined by said third-entity binding order to trade and

9   said at least one of said plurality of said opposite side first-entity binding indications

10   to trade.

1   99.   The computer-readable medium of claim 94, wherein said transmit

2   said third-entity binding order to trade comprises:

3   directly routing said third-entity binding order to trade.

1   100.   The computer-readable medium of claim 94, wherein said transmit

2   said third-entity binding order to trade comprises:

3   tagging said third-entity binding order to trade to be subsequently routed by a

4   primary order routing system; and

5   forwarding said tagged third-entity binding order to trade to said primary

6   order routing system to be routed.

1   101.   The computer-readable medium of claim 60, said steps further

2   comprising:

3   returning said third-entity binding order to trade said security at non-discrete

4   prices if an opposite side active first-entity binding indication to trade said security

5   is unavailable.

1   102.   The computer-readable medium of claim 60, said steps further

2   comprising:

3   transmitting said third-entity binding order to trade said security at non-

4   discrete prices to one of an exchange, a market maker, an electronic communications

5   network (ECN), an alternative trading system (ATS), and any other market center, if

6   said opposite active first-entity binding indication to trade said security is

7   unavailable.

1   103.   The computer-readable medium of claim 60, said steps further

2   comprising:

3   transmitting said third-entity binding order to trade said security at non-

4   discrete prices to an order routing service bureau or an order flow aggregator to be

5   routed to an exchange, a market maker, an electronic communications network

6   (ECN), an alternative trading system (ATS), or any other market center, if said

7   opposite active first-entity binding indication to trade said security is unavailable.

1   104.   The computer-readable medium of claim 60, said steps further

2   comprising:

3   executing said third-entity binding order to trade said security at non-discrete

4   prices as an exchange, a market maker, an electronic communications network

5   (ECN), an alternative trading system (ATS), or any other market center by acting as

6   a principal, an agent or a riskless principal, if said opposite active first-entity binding

7   indication to trade said security is unavailable.

1   105.   A method for the continuous buying and selling of securities,

2   comprising:

3   receiving at least one active first-entity binding indication to trade securities

4   at non-discrete prices;

5   storing said at least one active first-entity binding indication to trade

6   securities;

7   transmitting information on said at least one active first-entity binding

8   indication to trade securities at non-discrete prices to be used to determine if a third-

9   entity binding order to trade a security is on an opposite side of at least one of said at

10   least one active first-entity binding indication to trade said security; and

11   executing a trade defined by said at least one of said at least one active first-

12   entity binding indication to trade said security and said third-entity binding order to

13   trade said security immediately upon receipt of said third-entity binding order to

14   trade said security, if said at least one of said at least one active first-entity binding

15   indication to trade said security is on the opposite side of said third-entity binding

16   order to trade said security.

1   106.   The method of claim 105, wherein said trade is executed by a sponsor

2   acting as an agent or as a riskless principal.

1   107.   The method of claim 106, wherein said sponsor is a registered broker

2   dealer which serves as a counter-party for all trades, so that the identities of the

3   sources of said at least one active first-entity binding indication to trade securities

4   and said third-entity binding order to trade said security are anonymous to each other

5   during a clearance and settlement process.

1   108.   The method of claim 106, wherein said sponsor is a source of one or

2   more of said at least one active first-entity binding indication to trade and of said

3   third-entity binding order to trade.

1   109.   The method of claim 105, wherein storing said at least one active

2   first-entity binding indication to trade said security comprises:

3   storing said at least one active first-entity binding indication to trade said

4   security in a central database.

1   110.   The method of claim 105, wherein said at least one active first-entity

2   binding indication to trade each comprise:

3   a trading symbol representing said security;

4   a side for said trade of said security, wherein said side is defined as either a

5   buy or a sell; and

6   a quantity representing a number of shares of said security to be traded.

1   111.   The method of claim 110, wherein said at least one active first-entity

2   binding indication to trade each further comprise:

3   a price limit.

1   112.   The method of claim 105, wherein each of said active first-entity

2   binding indication to trade and said third-entity binding order to trade are invisible to

3   all other market participants such that neither said active first-entity binding

4   indication to trade nor said third-entity binding order to trade are displayed on any

5   terminal or in any quotation.

1   113.   The method of claim 105, wherein each of said at least one third-

2   entity binding order to trade comprises at least:

3   a trading symbol representing said security;

4   a side for said trade of said security;

5   a quantity representing a number of shares of said security to be traded; and

6   an order type selected from at least a post-open market order and a

7   marketable limit order.

1   114.   The method of claim 105, wherein said securities are selected from

2   the group comprising at least:

3   a stock;

4   a share;

5   an equity;

6   a derivative;

7   a warrant;

8   an option; and

9   a bond.

1   115.   The method of claim 105, wherein an opposite side of a sell

2   indication is defined as a buy order or a buy indication and said opposite side of a

3   buy indication is defined as a sell order or said sell indication.

1   116.   The method of claim 105, wherein said executing said trade defined

2   by said at least one of said at least one active first-entity binding indication to trade

3   said security and said third-entity binding order to trade said security can result in

4   one or both of said at least one of said at least one active first-entity indication or

5   said third-entity binding order being partially filled.

1   117.   The method of claim 105, further comprising:

2   executing a trade defined by said at least one of said at least one active first-

3   entity binding indication to trade said security and a plurality of third-entity binding

4   orders to trade said security immediately upon receipt of said plurality of third-entity

5   binding orders to trade said security, if said plurality of third-entity binding orders to

6   trade are on an opposite side of said at least one of said at least one active first-entity

7   binding indication to trade said security.

1   118.   The method of claim 117, wherein said executing said trade defined

2   by said at least one of said at least one active first-entity binding indications to trade

3   said security and said plurality of third-entity binding orders to trade said security

4   can result in at least one of said at least one of said at least one active first-entity

5   indication and said plurality of third-entity binding orders being partially filled.

1   119.   The method of claim 105, wherein each of said at least one of said at

2   least one active first-entity binding indication to trade is a binding non-retail order to

3   trade.

1   120.   The method of claim 105, wherein said third-entity binding order to

2   trade is a retail marketable order.

1   121.   The method of claim 120, wherein said retail marketable order is

2   selected from the group comprising:

3   a buy order with a limit price that is greater than or equal to the national best

4   offer for said security;

5   a sell order with a limit price that is less than or equal to the national best bid

6   for said security; and

7   a post open market order to buy or sell said security.

1   122.   The method of claim 105, wherein said active first-entity binding

2   indication to trade and said active second-entity binding indication to trade can

3   change between being active and inactive, depending on at least one factor, said

4   factor being selected from the group including at least:

5   a first optional price limit associated with said active first-entity binding

6   indication to trade in relation to said non-discrete prices; and

7   a second optional price limit associated with said active second-entity

8   binding indication to trade in relation to said non-discrete prices.

1   123.   The method of claim 105, wherein executing a trade defined by said

2   at least one of said at least one active first-entity binding indication to trade said

3   security and said third-entity binding order to trade said security comprises:

4   matching said at least one of said at least one active first-entity binding

5   indication to trade said security with an opposite side third-entity binding order to

6   trade said security immediately upon receipt of said opposite side third-entity

7   binding order to trade; and

8   executing the trade defined by the matched said at least one of said at least

9   one active first-entity binding indication to trade said security and said opposite side

10   third-entity binding order to trade said security.

1   124.   The method of claim 105, wherein said third-entity binding order to

2   trade can be received from at least one source of said third-entity binding orders to

3   trade or at least one intermediary, wherein said intermediary receives said at least

4   one third-entity binding order from one of said at least one source of said third-entity

5   binding orders to trade.

1   125.   The method of claim 124, wherein receiving said third-entity binding

2   order to trade from said intermediary comprises:

3   receiving said third-entity binding order to trade from an order routing

4   service bureau, an electronic communications network (ECN), or any other

5   processor or aggregator of orders which communicates with said at least one source

6   of said third-entity binding orders.

1   126.   The method of claim 109, further comprising:

2   reporting the executed trades; and

3   updating said central database to reflect the executed trades.

1   127.   The method of claim 126, further comprising:

2   transmitting updated information from said updated central database on said

3   at least one active first-entity binding indication to trade said security at non-discrete

4   prices to be used to determine if said third-entity binding order to trade said security

5   is on the opposite side of said at least one of said at least one active first-entity

6   binding indication to trade said security.

1   128.   The method of claim 105, further comprising:

2   receiving at least one fee for the executed trade; and

3   transmitting a payment to a source of said third-entity binding order, if the

4   executed trade included said third-entity binding order to trade.

1   129.   The method of 128, wherein said receiving at least one fee for the

2   executed trade comprises:

3   receiving a first fee from a source of said at least one of said at least one

4   active first-entity binding indication for the executed trade.

1   130.   The method of claim 105, further comprising:

2   determining said non-discrete prices using national best bid and offer

3   (NBBO) data for each of said securities.

1   131.   The method of claim 130, wherein said determining said non-discrete

2   prices using national best bid and offer (NBBO) data for said security comprises:

3   determining an execution price for a third-entity buy order for said security

4   to be equal to one-quarter of an NBBO spread less than the national best offer for

5   said security;

6   determining an execution price for a third-entity sell order for said security to

7   be equal to one-quarter of the NBBO spread more than the national best bid for said

8   security; and

9   determining an execution price for a first-entity indication to buy or sell said

10   security to be equal to a midpoint of the NBBO spread for said security.

1   132.   The method of claim 105, further comprising:

2   transmitting information on said at least one active first-entity binding

3   indication to trade said security at non-discrete prices, said information to be used to

4   determine if said third-entity binding order to trade said security is on the opposite

5   side of said one of said at least one active first-entity binding indication to trade said

6   security.

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1   133.   The method of claim 132, wherein transmitting information on

2   said at least one active first-entity binding indication to trade said security at non-

3   discrete prices, said information to be used to determine if said third-entity binding

4   order to trade said security is on the opposite side of said one of said at least one

5   active first-entity binding indication to trade said security comprises:

6   transmitting a security trading symbol for said security; and

7   transmitting a trading side for said security.

1   134.   The method of claim 133, wherein transmitting information on

2   said at least one active first-entity binding indication to trade said security at non-

3   discrete prices, said information to be used to determine if said third-entity binding

4   order to trade said security is on the opposite side of said one of said at least one

5   active first-entity binding indication to trade said security further comprises:

6   transmitting national best bid and offer (NBBO) data for said security.

1   135.   The method of claim 105, wherein said executing a trade defined

2   by said at least one of said at least one first-entity binding indication to trade said

3   security and said third-entity binding order to trade said security immediately upon

4   receipt of said third-entity binding order comprises:

5   receiving a query requesting instructions regarding said third-entity binding

6   order to trade;

7   determining whether to request said third-entity binding order to trade;

8   providing a response to said received query;

9   executing said trade immediately upon receipt of said third-entity binding

10   order.

1   136.   The method of claim 135, wherein said providing said response to

2   said received query comprises:

3   transmitting an instruction to either:

4   transmit said third-entity binding order to trade; or

5   decline said third-entity binding order to trade.

1   137.   The method of claim 136, wherein said instruction to decline said
2   third-entity binding order to trade results in said third-entity binding order to trade
3   being automatically routed to one of an alternate exchange, an electronic
4   communications network (ECN), a market maker, and any other market center.

1   138.   The method of claim 136, wherein said instruction to transmit said
2   third-entity binding order to trade said security only occurs when at least one
3   opposite side at least one active first-entity binding indication to trade said security
4   is available.

1   139.   The method of claim 135, wherein said executing said trade
2   immediately upon receipt of said third-entity binding order comprises:
3   receiving said third-entity binding order to trade;
4   matching said third-entity binding order to trade with at least one opposite
5   side active first-entity binding indication to trade; and
6   executing the trade defined.by said third-entity binding order to trade and
7   said at least one opposite side active first-entity binding indication to trade.

1   140.   The method of claim 135, wherein a plurality of opposite side active
2   first-entity binding indications to trade are available and wherein said executing said
3   trade immediately upon receipt of said third-entity binding order comprises:
4   receiving said third-entity binding order to trade;
5   matching said third-entity binding order to trade with at least one of said
6   plurality of opposite side active first-entity binding indications to trade; and
7   executing the trade defined by said third-entity binding order to trade and
8   said at least one of said plurality of said opposite side active first-entity binding
9   indications to trade.

1   141.   The method of claim 136, wherein said transmit said third-entity
2   binding order to trade comprises:
3   directly routing said third-entity binding order to trade.

1   142.   The method of claim 136, wherein said transmit said third-entity

2   binding order to trade comprises:

3   tagging said third-entity binding order to trade to be subsequently routed by a

4   primary order routing system; and

5   forwarding said tagged third-entity binding order to trade to said primary

6   order routing system to be routed.

1   143.   The method of claim 105, further comprising:

2   returning said third-entity binding order to trade said security at non-discrete

3   prices if at least one opposite side active first-entity binding indication to trade said

4   security is unavailable.

1   144.   The method of claim 105, further comprising:

2   transmitting said third-entity binding order to trade said security at non-

3   discrete prices to one of an exchange, a market maker, an electronic communications

4   network (ECN), an alternative trading system (ATS), and any other market center, if

5   said opposite side active first-entity binding indication to trade said security is

6   unavailable.

1   145.   The method of claim 105, further comprising:

2   transmitting said third-entity binding order to trade said security at non-

3   discrete prices to an order routing service bureau or an order flow aggregator to be

4   routed to an exchange, a market maker, an electronic communications network

5   (ECN), an alternative trading system (ATS), or any other market center, if said

6   opposite active first-entity binding indication to trade said security is unavailable.

1   146.   The method of claim 105, further comprising:

2   executing said third-entity binding order to trade said security at non-discrete

3   prices as an exchange, a market maker, an electronic communications network

4   (ECN), an alternative trading system (ATS), or any other market center by acting as

5   a principal, an agent or a riskless principal, if said opposite side active first-entity

6   binding indication to trade said security is unavailable.

1   147.   An article of manufacture comprising a computer-readable medium

2   having stored thereon instructions adapted to be executed by a processor, the

3   instructions which, when executed, define a series of steps to perform the continuous

4   buying and selling of securities, said steps comprising:

5   receiving at least one active first-entity binding indication to trade securities

6   at non-discrete prices;

7   storing said at least one active first-entity binding indication to trade

8   securities;

9   transmitting information on said at least one active first-entity binding

10 indication to trade securities at non-discrete prices to be used to determine if a third-

11 entity binding order to trade a security is on an opposite side of at least one of said at

12 least one active first-entity binding indication to trade said security; and

13   executing a trade defined by said at least one of said at least one active first-

14 entity binding indication to trade said security and said third-entity binding order to

15 trade said security immediately upon receipt of said third-entity binding order to

16 trade said security, if said at least one of said at least one active first-entity binding

17 indication to trade said security is on an opposite side of said third-entity binding

18 order to trade said security.

1   148.   The computer-readable medium of claim 147, wherein said trade is

2   executed by a sponsor acting as an agent or as a riskless principal.

1   149.   The computer-readable medium of claim 148, wherein said sponsor is

2   a registered broker dealer which serves as a counter-party for all trades, so that the

3   identities of the sources of said at least one active first-entity binding indication to

4   trade securities and said third-entity binding order to trade said security are

5   anonymous to each other during a clearance and settlement process.

1   150.   The computer-readable medium of claim 147, wherein said sponsor is

2   a source of one or more of said at least one active first-entity binding indication to

3   trade and of said third-entity binding order to trade.

1   151.   The computer-readable medium of claim 147, wherein storing said at

2   least one active first-entity binding indication to trade said security comprises:

3   storing said at least one active first-entity binding indication to trade said

4   security in a central database.

1   152.   The computer-readable medium of claim 147, wherein said at least

2   one active first-entity binding indication to trade each comprise:

3   a trading symbol representing said security;

4   a side for said trade of said security, wherein said side is defined as either a

5   buy or a sell; and

6   a quantity representing a number of shares of said security to be traded.

1   153.   The computer-readable medium of claim 152, wherein said at least

2   one active first-entity binding indication to trade each further comprise:

3   a price limit.

1   154.   The computer-readable medium of claim 147, wherein each of said

2   active first-entity binding indication to trade and said third-entity binding order to

3   trade are invisible to all other market participants such that neither said active first-

4   entity binding indication to trade nor said third-entity binding order to trade are

5   displayed on any terminal or in any quotation.

1   155.   The computer-readable medium of claim 147, wherein each of said at

2   least one third-entity binding order to trade comprises at least:

3   a trading symbol representing said security;

4   a side for said trade of said security;

5   a quantity representing a number of shares of said security to be traded; and

6   an order type selected from at least a post-open market order and a

7   marketable limit order.

1   156.   The computer-readable medium of claim 147, wherein said securities

2   are selected from the group comprising at least:

3   a stock;

4   a share;

5   an equity;

6   a derivative;

7   a warrant;

8   an option; and

9   a bond.

1   157.   The computer-readable medium of claim 147, wherein an opposite

2 side of a sell indication is defined as a buy order or a buy indication and said

3 opposite side of a buy indication is defined as a sell order or said sell indication.

1   158.   The computer-readable medium of claim 147, wherein said executing

2 said trade defined by said at least one of said at least one active first-entity binding

3 indication to trade said security and said third-entity binding order to trade said

4 security can result in one or both of said at least one of said at least one active first-

5 entity indication or said third-entity binding order being partially filled.

1   159.   The computer-readable medium of claim 147, said steps further

2 comprising:

3   executing a trade defined by said at least one of said at least one active first-

4 entity binding indication to trade said security and a plurality of third-entity binding

5 orders to trade said security immediately upon receipt of said plurality of third-entity

6 binding orders to trade said security, if said plurality of third-entity binding orders to

7 trade are on an opposite side of said at least one of said at least one active first-entity

8 binding indication to trade said security.

1   160.   The computer-readable medium of claim 159, wherein said executing

2 said trade defined by said at least one of said at least one active first-entity binding

3 indications to trade said security and said plurality of third-entity binding orders to

4 trade said security can result in at least one of said at least one of said at least one

5 active first-entity indication and said plurality of third-entity binding orders being

6 partially filled.

1   161.   The computer-readable medium of claim 147, wherein each of said at

2   least one of said at least one active first-entity binding indication to trade is a

3   binding non-retail order to trade.

1   162.   The computer-readable medium of claim 147, wherein said third-

2   entity binding order to trade is a retail marketable order.

1   163.   The computer-readable medium of claim 162, wherein said retail

2   marketable order is selected from the group comprising:

3   a buy order with a limit price that is greater than or equal to the national best

4   offer for said security;

5   a sell order with a limit price that is less than or equal to the national best bid

6   for said security; and

7   a post open market order to buy or sell said security.

1   164.   The computer-readable medium of claim 147, wherein said active

2   first-entity binding indication to trade and said active second-entity binding

3   indication to trade can change between being active and inactive, depending on at

4   least one factor, said factor being selected from the group including at least:

5   a first optional price limit associated with said active first-entity binding

6   indication to trade in relation to said non-discrete prices; and

7   a second optional price limit associated with said active second-entity

8   binding indication to trade in relation to said non-discrete prices.

1   165.   The computer-readable medium of claim 147, wherein executing a

2   trade defined by said at least one of said at least one active first-entity binding

3   indication to trade said security and said third-entity binding order to trade said

4   security comprises:

5   matching said at least one of said at least one active first-entity binding

6   indication to trade said security with an opposite side third-entity binding order to

7   trade said security immediately upon receipt of said opposite side third-entity

8   binding order to trade; and

9   executing the trade defined by the matched said at least one of said at least

10   one active first-entity binding indication to trade said security and said opposite side

11   third-entity binding order to trade said security.

1   166.   The computer-readable medium of claim 147, wherein said third-

2   entity binding order to trade can be received from at least one source of said third-

3   entity binding orders to trade or at least one intermediary, wherein said intermediary

4   receives said at least one third-entity binding order from one of said at least one

5   source of said third-entity binding orders to trade.

1   167.   The computer-readable medium of claim 166, wherein receiving said

2   third-entity binding order to trade from said intermediary comprises:

3   receiving said third-entity binding order to trade from an order routing

4   service bureau, an electronic communications network (ECN), or any other

5   processor or aggregator of orders which communicates with said at least one source

6   of said third-entity binding orders.

1   168.   The computer-readable medium of claim 152, said steps further

2   comprising:

3   reporting the executed trades; and

4   updating said central database to reflect the executed trades.

1   169.   The computer-readable medium of claim 151, said steps further

2   comprising:

3   transmitting updated information from said updated central database on said

4   at least one active first-entity binding indication to trade said security at non-discrete

5   prices to be used to determine if said third-entity binding order to trade said security

6   is on the opposite side of said at least one of said at least one active first-entity

7   binding indication to trade said security.

1   170.   The computer-readable medium of claim 147, said steps further

2   comprising:

3   receiving at least one fee for the executed trade; and

4   transmitting a payment to a source of said third-entity binding order, if the

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5   executed trade included said third-entity binding order to trade.

1   171.   The computer-readable medium of 170, wherein said receiving at

2   least one fee for the executed trade comprises:

3   receiving a first fee from a source of said at least one of said at least one

4   active first-entity binding indication for the executed trade.

1   172.   The computer-readable medium of claim 147, said steps further

2   comprising:

3   determining said non-discrete prices using national best bid and offer

4   (NBBO) data for each of said securities.

1   173.   The computer-readable medium of claim 172, wherein said

2   determining said non-discrete prices using national best bid and offer (NBBO) data

3   for said security comprises:

4   determining an execution price for a third-entity buy order for said security

5   to be equal to one-quarter of an NBBO spread less than the national best offer for

6   said security;

7   determining an execution price for a third-entity sell order for said security to

8   be equal to one-quarter of the NBBO spread more than the national best bid for said

9   security; and

10   determining an execution price for a first-entity indication to buy or sell said

11 security to be equal to a midpoint of the NBBO spread for said security.

1   174.   The computer-readable medium of claim 147, said steps further

2   comprising:

3   transmitting information on said at least one active first-entity binding indication to

4   trade said security at non-discrete prices, said information to be used to determine if

5   said third-entity binding order to trade said security is on the opposite side of said

6   one of said at least one active first-entity binding indication to trade said security.

1   175.   The computer-readable medium of claim 174, wherein transmitting
2   information on said at least one active first-entity binding indication to trade said
3   security at non-discrete prices, said information to be used to determine if said third-
4   entity binding order to trade said security is on the opposite side of said one of said
5   at least one active first-entity binding indication to trade said security comprises:
6   transmitting a security trading symbol for said security; and
7   transmitting a trading side for said security.

1   176.   The computer-readable medium of claim 175, wherein transmitting
2   information on said at least one active first-entity binding indication to trade said
3   security at non-discrete prices, said information to be used to determine if said third-
4   entity binding order to trade said security is on the opposite side of said one of said
5   at least one active first-entity binding indication to trade said security further
6   comprises:
7   transmitting national best bid and offer (NBBO) data for said security.

1   177.   The computer-readable medium of claim 147, wherein said executing
2   a trade defined by said at least one of said at least one first-entity binding indication
3   to trade said security and said third-entity binding order to trade said security
4   immediately upon receipt of said third-entity binding order comprises:
5   receiving a query requesting instructions regarding said third-entity binding
6   order to trade;
7   determining whether to request said third-entity binding order to trade;
8   providing a response to said received query;
9   executing said trade immediately upon receipt of said third-entity binding
10   order.

1   178.   The computer-readable medium of claim 177, wherein said providing
2   said response to said received query comprises:
3   transmitting an instruction to either:
4   transmit said third-entity binding order to trade; or
5   decline said third-entity binding order to trade.

1   179.   The computer-readable medium of claim 178, wherein said

2   instruction to decline said third-entity binding order to trade results in said third-

3   entity binding order to trade being automatically routed to one of an alternate

4   exchange, an electronic communications network (ECN), a market maker, and any

5   other market center.

1   180.   The computer-readable medium of claim 177, wherein said

2   instruction to transmit aid third-entity binding order to trade said security only

3   occurs when at least one opposite side at least one active first-entity binding

4   indication to trade said security is available.

1   181.   The computer-readable medium of claim 177, wherein said executing

2   said trade immediately upon receipt of said third-entity binding order comprises:

3   receiving said third-entity binding order to trade;

4   matching said third-entity binding order to trade with at least one opposite

5   side active first-entity binding indication to trade; and

6   executing the trade defined by said third-entity binding order to trade and

7   said at least one opposite side active first-entity binding indication to trade.

1   182.   The computer-readable medium of claim 177, wherein a plurality of

2   opposite side active first-entity binding indications to trade are available and

3   wherein said executing said trade immediately upon receipt of said third-entity

4   binding order comprises:

5   receiving said third-entity binding order to trade;

6   matching said third-entity binding order to trade with at least one of said

7   plurality of opposite side active first-entity binding indications to trade; and

8   executing the trade defined by said third-entity binding order to trade and

9   said at least one of said plurality of said opposite side active first-entity binding

10   indications to trade.

1   183.   The computer-readable medium of claim 178, wherein said transmit

2   said third-entity binding order to trade comprises:

3   directly routing said third-entity binding order to trade.

1   184.   The computer-readable medium of claim 178, wherein said transmit

2   said third-entity binding order to trade comprises:

3   tagging said third-entity binding order to trade to be subsequently routed by a

4   primary order routing system; and

5   forwarding said tagged third-entity binding order to trade to said primary

6   order routing system to be routed.

1   185.   The computer-readable medium of claim 147, said steps further

2   comprising:

3   returning said third-entity binding order to trade said security at non-discrete

4   prices if at least one opposite side active first-entity binding indication to trade said

5   security is unavailable.

1   186.   The computer-readable medium of claim 147, said steps further

2   comprising:

3   transmitting said third-entity binding order to trade said security at non-

4   discrete prices to one of an exchange, a market maker, an electronic communications

5   network (ECN), an alternative trading system (ATS), and any other market center, if

6   said opposite side active first-entity binding indication to trade said security is

7   unavailable.

1   187.   The computer-readable medium of claim 147, said steps further

2   comprising:

3   transmitting said third-entity binding order to trade said security at non-

4   discrete prices to an order routing service bureau or an order flow aggregator to be

5   routed to an exchange, a market maker, an electronic communications network

6   (ECN), an alternative trading system (ATS), or any other market center, if said

7   opposite active first-entity binding indication to trade said security is unavailable.

1   188.   The computer-readable medium of claim 147, said steps further

2   comprising:

3   executing said third-entity binding order to trade said security at non-discrete

4   prices as an exchange, a market maker, an electronic communications network

5   (ECN), an alternative trading system (ATS), or any other market center by acting as

6   a principal, an agent or a riskless principal, if said opposite side active first-entity

7   binding indication to trade said security is unavailable.

1   189.   A system which facilitates the continuous interaction of institutional

2   and retail marketable orders at non-discrete prices, comprising:

3   a central order match box (COMB) component; and

4   at least one dynamic order router (DOR) connected to said COMB, wherein,

5   said COMB can transmit to each of said at least one DOR a list of marketable

6   institutional orders; each of said at least one DOR can transmit a query to said

7   COMB if any incoming marketable retail orders match any of said list of marketable

8   institutional orders; said COMB can transmit instructions back to each of said at

9   least one DOR that had transmitted a query; each of said at least one DOR can then

10   route said matching marketable retail order to said COMB if instructed to do so by

11   said COMB; and said COMB can receive said matching marketable retail order,

12   match said matching marketable retail order with the matching marketable

13   institutional order and execute the trade defined by the matched marketable orders.

1   190.   The system of claim 189, wherein said COMB component comprises:

2   a match box component;

3   a financial information exchange (FIX) middleware component connected to

4   said match box component;

5   a marketpoint FIX engine component connected to said FIX middleware

6   converter component and said marketpoint FIX engine component includes at least

7   one external communication port;

8   a DOR proxy component connected to said match box component, wherein

9   said DOR proxy includes at least one external communication port;

10   a data warehouser component connected to said match box component;

11   a clearing and settlement system component connected to said data

12   warehouser component;

13   a trade report scanner component connected to said match box component;

14   a quote feed parser component connected to said match box component; and

15   a monitor graphical user interface (GUI) connected to said match box

16   component.

1   191.   The system of claim 189, wherein said marketpoint FIX engine

2   component can transmit and receive via said at least one external communication

3   port said marketable institutional orders, said marketable retail orders, and other

4   order and trade-related information.

1   192.   The system of claim 189, wherein said DOR proxy component can

2   transmit and receive via said at least one external communication port said

3   marketable retail orders and other order and trade-related information.

1   193.   The system of claim 189, wherein said at least one DOR is in

2   communication with at least one retail broker system and at least one retail FIX

3   engine is in communication with said at least one retail broker system and said

4   COMB.

1   · 194.   The system of claim 192, further comprising:

2   at least one institutional interface in communication with an institutional

3   system and said COMB, wherein each of said at least one institutional interfaces

4   includes:

5   an institutional FIX engine in communication with said institutional

6   system and said COMB; and

7   an institutional GUI application in communication with said COMB.

1   195.   A system that facilitates the continuous interaction of marketable

2   orders at non-discrete prices, the apparatus comprising:

3   a match box component;

4   a financial information exchange (FIX) middleware component connected to

5   said match box component;

6   a marketpoint FIX engine component connected to said FIX middleware

7   converter component and said marketpoint FIX engine component includes at least

8   one external communication port;

9   a DOR proxy component connected to said match box component and said

10   DOR proxy includes at least one external communication port;

11   a data warehouser component connected to said match box component;

12   a clearing and settlement system component connected to said data

13   warehouser component;

14   a trade report scanner component connected to said match box component;

15   a quote feed parser component connected to said match box component; and

16   a monitor graphical user interface (GUI) connected to said match box

17   component.

1   196.   The system of claim 195, wherein said DOR proxy component

2   communicates with at least one DOR to transmit information on marketable

3   institutional orders, receive queries from said at least one DOR, transmit instructions

4   to said at least one DOR; and receive marketable retail orders from said at least one

5   DOR.

1   197.   The system of claim 195, wherein said match box component

2   matches and executes trades of marketable orders on opposite sides for a single

3   security

1   198.   The system of claim 195, wherein said data warehouser component

2   receives and maintains a central database of all said received marketable institutional

3   orders.

1   199.   The system of claim 195, wherein said quote feed component

2   receives price quote information on securities from said security price quote system

3   and provides said price quote information to said match box component

1   200.   The system of claim 195, wherein said trade report component

2   receives data on securities and transmits said data to said matching component.

1   201.   The system of claim 195, wherein said clearing and settlement

2   component reports executed trades, updates said central database of all said received

3   marketable institutional orders, receives payment for said executed trades and

4   transfers proceeds from said executed trades.

1   202.   A dynamic order router (DOR) to facilitate the continuous interaction

2   of retail and institutional marketable orders at non-discrete prices, comprising:

3   a DOR client component to receive marketable retail orders for at least one

4   security; and

5   a DOR server component connected to said DOR client component, said

6   DOR server component to:

7   receive a listing of marketable institutional orders for at least one

8   security;

9   compare said received listing of marketable institutional orders with

10   incoming marketable retail orders;

11   transmit a query requesting at least one instruction, if a matching

12   marketable institutional order and marketable retail order are found;

13   receive said requested at least one instruction; and

14   route said matched marketable retail order according to said received

15   at least one instruction.

1   203.   The DOR of claim 202, wherein said DOR client component is in

2   communication with a retail broker system to monitor and route said incoming

3   marketable retail orders.

1   204.   The DOR of claim 202, wherein said DOR is in communicate with a

2   central order match box (COMB) to route said incoming marketable retail orders

3   either directly to said COMB via said DOR server or indirectly to said COMB via

4   said retail broker system.

1   205.   The DOR of claim 203, wherein said received at least one instruction

2   is to notify said DOR server component to tag any matched marketable retail orders

3   to be routed for execution against said matched marketable institutional orders.

1   206.   The DOR of claim 204, wherein said DOR client component is in

2   communication with a retail broker system to monitor said incoming marketable

3   retail orders.

1   207.   A crossing network that facilitates the continuous interaction of

2   marketable retail orders with professional trading interest at non-discrete prices, the

3   crossing network comprising:

4   at least one dynamic order router (DOR) to receive and forward at least one

5   retail order for at least one first instrument representing either a buy order or a sell

6   order for each of said at least one first instrument;

7   at least one institutional interface (II) to transmit at least one institutional

8   order indication for at least one second instrument representing either a buy order or

9   a sell order for each of said at least one second instrument; and

10   a central order-match box (COMB) connected to each of at least one DOR

11   and II over a communications network, the COMB including:

12   a receiving subsystem to communicate with said at least one DOR

13   and least one II;

14   a data subsystem to maintain a listing of the institutional order

15   indications; and

16   a matching subsystem to match and execute orders on opposite sides

17   for each of said at least one first instrument.

1   208.   The crossing network of claim 207, wherein said matching subsystem

2   automatically matches and executes said orders on opposite sides for each of said at

3   least one first instrument.

1   209.   The crossing network of claim 207, wherein said matching subsystem

2   comprises:

3   a match box component configured to manage said marketable institutional

4   and retail orders, match opposite side orders for a single security, and execute a trade

5   defined by said matched opposite side orders for said single security;

6   a trade report scanner connected to said match box component, said trade

7   report scanner to provide reports on said executed trades;

8   a quote feed parser connected to said match box component, said quote feed

9   parser to receive real time data feeds and quote and transaction data and transmit

10   said real time data feeds and said quote and transaction data to said match box; and

11   a monitor graphical user interface (GUI) connected to said match box to

12   monitor a state of applications in said match box, manually enter orders and/or

13   executions into said match box, and correct errors in said match box.

1   210.   The crossing network of claim 207, wherein said receiving subsystem

2   receives said at least one institutional order indication and said at least one retail

3   order indication.

1   211.   The crossing network of claim 210, wherein said receiving subsystem

2   comprises:

3   a DOR proxy connected to said match box, said DOR proxy to communicate

4   with said DOR;

5   a marketpoint FIX engine to communicate with retail broker systems and

6   institutional systems; and

7   a FIX middleware converter connected to said match box and said

8   marketpoint FIX engine, said FIX middleware converter to transfer messages

9   between said match box and said marketpoint FIX engine.

1   212.   The crossing network of claim 207, wherein said data subsystem

2   comprises:

3   a data warehouser connected to said match box, said data warehouser to store

4   information related to said marketable retail and institutional orders; and

5   a clearing and settlement system connected to said data warehouser, said

6   clearing and settlement system to transmit clearing and settlement data to a clearing

7   broker and to prepare periodic trade summary reports.

1   213.   The crossing network of claim 212, wherein said clearing and

2   settlement system transmits said periodic trade summary reports to system

3   customers and securities regulators.

1   214.   A computer system which facilitates the continuous interaction of

2   institutional and retail marketable orders at non-discrete prices, comprising:

3   a processor system;

4   a random access memory (RAM) connected to said processor system;

5   a mass memory storage unit connected to said processor system;

6   a communication system connected to said processor system; and

7   an article of manufacture comprising a computer-readable medium having

8   stored thereon instructions adapted to be executed by a processor, the instructions

9   which, when executed, define a series of steps to perform the continuous buying and

10 selling of securities, said steps including:

11   receiving at least one binding indication to trade at least one security

12 at non-discrete prices from at least one institution;

13   storing each of said at least one active binding indications to trade at

14 least one security;

15   executing a first trade defined by a first of said at least one active

16 binding indication to trade one of said at least one security and a second of said at

17 least one active binding indication to trade said one of said at least one security

18 immediately upon receipt of said second of said at least one active binding

19 indication to trade, if said second of said at least one active binding indication to

20 trade is on an opposite side from said first of said at least one active binding

21 indication to trade, said security and said first and second of said at least one active

22 binding indications to trade said one of said at least one security are from different

23 institutions, wherein said first trade is executed so that each of said first and second

24 active binding indications to trade are anonymous as to a source of each indication

25 and also invisible to all other market participants;

26   transmitting information on said at least one active binding indication

27 to trade at least one security at non-discrete prices to at least one source of binding

28 orders; and

29   executing a second trade defined by one of said at least one active

30 binding indication to trade said one of said at least one security and a binding order
31 to trade said one of said at least one security immediately upon receipt of said
32 binding order to trade said one of said at least one security, if said active binding
33 indication to trade said one of said at least one security is on an opposite side from
34 said binding order to trade said one of said at least one security, wherein said second
35 trade is executed so that said one of said at least one active binding indication to
36 trade said one of said at least one security and said binding order to trade said one of
37 said at least one security are anonymous as to said source of said active binding
38 indication to trade and a source of said binding order and also invisible to said other
39 market participants.

1   215.   The computer system of claim 214, wherein said processor system
2   comprises:
3   a dual-processor UltraSPARC-based server.

1   216.   The computer system of claim 214, wherein said mass memory
2   storage unit can be selected from, at least, the group comprising:
3   a floppy disk;
4   a zip disk;
5   a DVD disk;
6   a hard disk
7   a rewritable optical disk; and
8   a flash memory.

FIG.1

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**II:
Institutional
Interface**

FIX-based API and GUI

- used by institutional clients to enter, modify, and cancel indications
- real-time trade reporting, summary reports, etc.

150

Nasdaq

160

Clearing Broker

*Enter and
Update
Indications* →

← *Execution
Reports*

← *Quoting &
Reporting*

← *Trade
Information*

110

**COMB:
Central
Order-Match
Box**

- connected to DOR and II via dedicated telephone lines or the Internet
- maintains master indications file and informs order-selection mechanism in DOR modules
- executes retail and institutional orders
- sends execution reports to brokerages and institutions
- reports retail and institutional trades to consolidated tape
- generates clearing information at end of day

← *Routed
Orders*

*Execution
Reports* →

← *Quotes &
Prints*

120

**DOR:
Dynamic Order
Router**

Integrated into order-routing system at participant brokerages

- queries COMB in real time for each order
- dynamically routes matching orders to COMB for execution
- engineered for maximum reliability and graceful shutdown

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Data Feeds

2/6

FIG.2

FIG. 3A

FIG. 3B

FIG.4   350   5/6   480

Retail Broker System   Institutional System

120

442   130

DOR Client

                                          470   475
443   460

DOR Server   Retail FIX   Institutional   Institutional GUI
                    Engine   FIX Engine   Application

DOR   II

110

440   415   Marketpoint FIX
                              Engine   410

DOR Proxy   FIX Middleware
                                                         Converter

450   400   420

Monitor GUI   Match Box   Data Warehouser

                                                         425

                                                         Clearing and
435   430   Settlement
                                                         System
Quote Feed   Trade Report
Parser   Scanner

COMB

FIG.5

START

505
Institutional Clients
Submit Buy/Sell
Indications

510
COMB Receives and
Stores Institutional
Indications and Updates
DOR Interest Lists

507
Brokerage
Receives Retail
Buy/Sell Order

515
Any
Institution - Institution
Matches?   YES

NO

520
Any Potential
Institution - Retail
Matches?

NO

YES

530
DOR Queries COMB for Instructions
on Potentially Matching Retail Buy/
Sell Order

535
Route Potentially
Matched Retail Buy/Sell
Order to COMB?   NO

YES

540
Brokerage Routes Matched
Retail Buy/Sell Order to
COMB

545
COMB Receives Matched
Retail Buy/Sell Order

550
System Automatically
Executes Matched
Institution - Institution and
Institution - Retail Trades

555
System Reports
Transaction(s) and
Updates Databases

565
Clean-Up and System
Shut Down

END

560
Stop
Processing
Orders?   NO

YES